# LANGUAGE LEARNING

A Journal of Applied Linguistics

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## DEPARTMENTS

# THE CARROT ON THE STICK

When the implications of structural linguistics became known, there was a demand that these discoveries be applied to language teaching. As we all know, fulfillment was slow. With certain notable exceptions, the language teacher waited for the linguist, and the linguist was busy analyzing Middle High Kicka-poo. Even among those who were willing and able to tackle this enormous problem there was a difference of opinion. One group felt that the first step was to give linguistic training to teachers of French, Spanish, German, Latin, and English, who would then be able to improvise material as they went along. Another group, perhaps with more cogency, argued that the greater need was for proper materials and that even a linguistically orientated teacher could do little with a text which must be contradicted and supplemented on every page.

Fortunately we have now emerged from this impasse. There are now available textbooks which have been influenced to a greater or lesser degree by structuralism and there are teach-ers who have enough training to use these texts. The continu-ing discoveries in the field of language learning indicate clearly that these texts must be revised and rewritten for many years to come. And yet there seems at present to be an even more pressing problem.

There is a principle of learning theory that students do that for which they are rewarded, and the corollary of this is that one of our functions as teachers is to devise suitable rewards. Nothing is more effective than a test which rewards those who learned exactly what they were told to learn and punishes those who do not. The task is not an easy one, and traditional lan-guage teaching failed miserably. We wanted the students to know morphology, and we rewarded them for reciting paradigms; we wanted them to learn the lexicon and rewarded them for learning vocabulary lists; we alleged as our goal the ability to compre-hend the target language without recourse to English, and we rewarded them for memorizing a translation, whether their own or some one else's, which they would recite glibly in class. To show that they knew syntax they were either asked to recite rules or were asked to analyze the meaning of a passage in

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metaphysical terms. And when it came to phonology, they were either complimented upon their accent or told sympathetically that apparently they just didn't have "an ear."

To reward the student we must know exactly what we wish him to learn and must devise tests which do this properly; and the key surely lies in structural linguistics. For example, all structural linguists are familiar with the feature of language called *redundancy*, the prodigous amount of restating of information which is found in all languages. We may take advantage of this feature in the following way. A student is given a text of a foreign language to study carefully, perhaps something of some literary value, so as to justify intensive work. He is cautioned to study the text and not merely know the translation. In class he will then be given a copy of this text in which several words (or perhaps parts of numerous words) are missing in every line. He is then asked to read from this fragmentary text. If he knows the language and has carefully studied the text, he will be successful; but if he has only translated it, he will fail.

There are other uses of testing, such as determining grades or assigning placement, but these factors of motivation and guidance for proper study are by themselves important enough to suggest that a number of us should turn our full attention to the problem.

Waldo E. Sweet

# ETYMOLOGICAL CATEGORIES OF PRESENT-DAY ENGLISH AND THEIR PRODUCTIVITY

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Although histories of our language treat adequately the sources of English vocabulary and current books and journals make interesting compilations of new words, studies of the word-making potentialities of present-day English leave something to be desired. What are the most prevalent methods of word-making today? How do these methods compare with tendencies recorded in the history of the language?

This study will present a statistical analysis of a selection of new words from written English in order to determine which etymological categories are currently most productive. Data for analysis are derived from a 10% random sampling of about 8,000 words, about half of which are found in the *Addenda Section* (New Words) of *Webster's New International Dictionary, Second Edition* (Springfield: Merriam-Webster, 1954) and half in a *Dictionary of New Words*, compiled by Mary Reifer (New York: Philosophical Library, 1955). In addition, 488 "New Words" from 10 years of compilations in the journal *American Speech* were analyzed for the sake of comparison, although the words here cannot be taken as fully representative of word-making tendencies in that some words come from studies which make a special effort to collect a particular form, such as acronyms and noun incorporations. Each entry from the dictionary samplings and from *American Speech* was then classified according to its etymological similarity to other words in the data. Since careful definitions of etymological categories had to be established, no word was assigned to more than one category. Finally, frequencies of words in their etymological categories were computed in order to determine the relative productivity of each class in modern word-making.

The method, however, was not without problems, and we might note a few of them as illustrations of the general procedure. Being faced with a collection of data which must be classified is quite different from beginning with familiar etymological categories and then finding examples in the language to illustrate them. Moreover, if a system of classification is

to be useful, it must be both logical and easy enough for some-
one else to follow. It was therefore necessary to redefine more
strictly some familiar etymological categories and to establish
several new ones in order that all classifications on the basis
of the definitions set up should be mutually exclusive.

Some methods of word-making can be easily defined and
adequately describe certain classes of words taken from the
data. They are listed as follows with examples for each cate-
gory.

1. *Loan words* are taken into English from foreign languages
with a tendency in present-day English to preserve the foreign
pronunciation if not the foreign spelling: canasta, pizza, Viet-
Nam, apartheid, mambo, snorkel. Some people may not wish
to consider loan-words a "method" of word-making; however,
dictionaries include them in all compilations of new words.

2. *Pure root creation* is a process of forming from existing
possible sounds and sound sequences natural to the language a
word which never existed as such before in English: dacron,
hep, shmoo.

3. *Acronyms* are formed by putting together either the ini-
tial letters or the initial syllables of a word group. Sometimes
the resulting combination is easily pronounceable: CARE,
Benelux, UNIVAC. Sometimes the initial letters themselves will
be pronounced as a word: LP, G.I., TVA. In this case, a
spelling pronunciation may be used in written English; emcee,
teevee, Veep.

4. *Echoisms,* or onomatopoetic words, imitate the sound of
the thing or activity named: ack-ack, bebop, rebop.

5. *Sound symbolism* employs in word formation a restricted
group of morphemes which in certain contexts have acquired
symbolic associations. The only example from the data is
"jettie," but familiar historical examples are "nightie," "Jimmy,"
and "tummy."[1]

6. *Reduplications* are compounds which have recurrent syl-
lables, a fixed consonant framework with a variant stressed
vowel, or a variant consonant framework with a recurrent
stressed or unstressed vowel: hush-hush, creepie-peepie, huff-
duff, walkie-lookie.

7. *Shortenings,* or clipped words, involve the omission of
one or more syllables from the beginning or end of a word with
no shift in part of speech: bra, copter, non-sched, scope.

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[1]Except for the well-established use of $\{-iy\}$ as a morpheme ex-
pressing diminution or endearment, sound symbolism seems to be no
longer productive in English. But for other possible patterns of sound
symbolism see Morton W. Bloomfield, "Final Root-forming Morphemes,"
American Speech, XXVIII (October 1953), 158-64.

Other types of word-making are more difficult to describe. Compounding, for example, presents a problem in that all compounds are not alike. Often analogy is the inspiration for compounding but is too tenuous to list as a distinct category. According to the data, we have divided compounds into four classes as follows.

8. *Self- explaining compounds* can be interpreted literally: battle fatigue, radioastronomy, supermarket.

9. *Idiomatic compounds*, however, are elliptical in meaning and must be learned in context: egghead, hairy dog story, test-tube baby.

10. *Greek and Latin combining forms* are roots used as elements in forming modern scientific and technical terms, and are sometimes called "close compounds" in contrast to self-explaining and idiomatic compounds which are "phrasal compounds."[2] These roots are used as bound morphemes to form complex words, usually with other Greek and Latin roots but occasionally with an English root, much as one would put together a chemical formula for descriptive purposes: benthoscope, polyvinyl acetal, microgroove.

11. *Blends* are formed by combining the first part of one word with the second part of another or with a complete second word: contrail, motel, smaze.

Other methods of adapting existing words into new-word forms are as follows.

12. *Derivation* is the addition of derivational affixes to stems or roots to form new words: bizonal, inductee, unemployability. The vast majority of derivatives are formed by suffixation.[3]

13. *Functional change* is the shift of a word to a new syntactic class without form change, except in the case of words becoming nouns or verbs where they may use inflectional suffixes of these classes: atom-bomb (noun > verb), know how (verb > noun), premiere (noun > verb).

14. *Back-formations* are new words formed by the shortening of an existing word taken to be its derivative; the process always involves a shift in part of speech: babysit, dishwash, fellow travel. Although back-formations are not important among the new words sampled, they are nevertheless common

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[2]Charles F. Hockett, *A Course in Modern Linguistics* (New York, 1958), p. 243.

[3]F. W. Harwood and Alison M. Wright in "Statistical Study of English Word Formation," *Language*, XXXII (April-June 1956), 260-273, have studied the frequencies of the major derivational suffixes in English.

enough in the language as "nonce" expressions that seldom find their way into dictionaries.[4]

15. *Semantic change* involves the addition of distinctly new meanings to words already existing in the language: alligator, ghost, Munich. Some people prefer to regard these as "new meanings" rather than as "new words," but dictionaries and compilations of new words enter them separately and in our data we must classify them as semantic change words.

Finally, we should note that a few words could be classified in any one of several etymological categories. For example, "piggyback" (referring to one vehicle transporting another, such as a larger plane carrying a smaller one or a railroad flatcar hauling a loaded truck trailer) may have developed its present form from "pick-a-back" by processes of phonemic change, sound symbolism, reduplication, or folk etymology, but in its new-word sense it is clearly an example of semantic shift from an older meaning of the same word form "to carry on one's shoulders like a pack or bundle." Thus, whenever possible words were classified according to the process of word-making most responsible for the new-word status in the dictionaries.

The following table indicates in percentages of the 800 words in the random sampling and the 488 words from *American Speech* the relative significance of the various etymological categories in modern word-making.

We should note in conclusion the remarkable coincidence of the two dictionary samples throughout the range of word-making possibilities. Of first importance is compounding, and the four kinds of compounding (idiomatic, Greek and Latin, self-explaining, and blends) account for well-over half of the new words in present-day written English. If we add semantic change and derivation to compounding, we can account for about 85% of new words entered in the dictionaries. Even if we subtract Greek and Latin combining forms from this total, there is still significant evidence of the tendency of English today to use its inner resources for word making.[5] By using new combinations of existing words, by making old words accommodate new meanings,

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[4]Robert A. Hall, Jr. in "How We Noun-Incorporate in English," *American Speech*, XXXI (May 1956), 83-88, has a collection of nonce-expressions whose new-word status can usually be analyzed as back-formation or functional change.

[5]This is contrary to observations made in most histories of the English language. For example, Albert C. Baugh in *A History of the English Language* (2nd edition; New York, 1957) states that "Old English was more resourceful in utilizing its native material than Modern Eng-

## ETYMOLOGICAL CATEGORIES OF ENGLISH

| Etymological Categories | 10% Random Sampling of 4,000 words in Webster's New International Addenda, 1954 | 10% Random Sampling of 4,000 words in Dictionary of New Words, 1955 | 488 "New Words" in American Speech, April '48 - February '58 |
|---|---|---|---|
| Idiomatic Compounds | 24. 72 | 31. 13 | 13. 31 |
| Greek & Latin Combining Forms for Scientific & Technical Terms | 18. 48 | 11. 14 | 7. 79 |
| Semantic Change Words | 14. 13 | 12. 15 | 13. 72 |
| Derivatives | 13. 32 | 12. 65 | 15. 77 |
| Self-Explaining Compounds | 8. 11 | 10. 10 | 18. 85 |
| Acronyms | 5. 08 | 6. 83 | 5. 53 |
| Loan Words | 8. 11 | 3. 04 | 2. 25 |
| Blends | 2. 72 | 5. 02 | 7. 58 |
| Pure Root Creations | 1. 36 | 2. 51 | . 20 |
| Functional Change Words | . 54 | 2. 78 | 6. 56 |
| Shortenings | 1. 36 | 1. 57 | 1. 64 |
| Reduplications | . 82 | . 25 | . 61 |
| Echo Words | . 54 | . 25 | . 41 |
| Back-Formations | | . 25 | 5. 74 |
| Sound Symbolism | | . 25 | |

and by deriving new forms from existing words through a system of derivational affixes, we can readily and adequately adapt the English language to the communication needs of a modern dynamic society.

lish, which has come to rely to a large extent on its facility in borrowing and assimilating elements from other languages" (p. 75). Albert H. Marckwardt, however, in his *American English* (New York, 1958) gives a fuller and more careful account of the scope of word-making that has gone on in American English.

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# SOME ALLOPHONES CAN BE IMPORTANT

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I

Phonetics deals with "overt speech-behavior". Phonemics deals with "categories" of speech-behavior in language.[1] Not all forms of speech-behavior occur in all languages. Some occur in certain languages but not in others. Within each language some different speech acts are used contrastively to differentiate meaning; these differences are phonemic or distinctive. Some differences between speech acts do not differentiate meanings; these differences are phonetic or allophonic, that is, non-distinctive.

The inventory of phonemes in every language is exhaustive. Phonetic differences, on the other hand, are inexhaustive. Between the level of phonetic difference and that of phonemic difference, there is that of allophonic difference. Phonetic differences account for all the different speech acts in a language. For example, the different amounts of friction in /s/ as in the word *cease*. Allophonic differences account for the types of phonetic differences of a designated phoneme according to the environments in which they occur. For example, the different varieties of stops of each of the three voiceless stops in English. The voiceless stops can occur with aspiration as in *pill*, *till*, and *kill*. They may occur unaspirated or with minimal aspiration[2] as in *spill*, *still*, and *skill*. They may occur aspirated, unaspirated, or unreleased as in *lip*, *lit*, and *lick*. All these differences are phonetic. But the aspirated, unaspirated, and unreleased stops in *pill*, *spill*, and *lip* are assigned to /p/. They are allophones of /p/. The aspirated, unaspirated, and unreleased stops in *till*, *still*, and *lit* are assigned to /t/. They are allophones of /t/. The aspirated, unaspirated, and unre-

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[1]Martin Joos, "Description of Language Design," *The Journal of the Acoustical Society of America*, **XX** (1950), p. 704.

[2]Hereafter "unaspirated" will be used to mean "unaspirated or with minimal aspiration".

leased stops in *kill*, *skill*, and *lick* are assigned to /k/. They are allophones of /k/. Phonetic differences make allophones.

In a theoretical analysis of the phonology of a given language, the linguist aims at exhausting the distinctive features and arriving at a limited number of phonemes of that language. And the distinctive features of phonemes are arrived at after the distributions of the allophones are studied. In the teaching of a foreign language, a comparison between the phonemic systems of both languages is essential. The purpose is to discover the phonemes that occur in the foreign language which do not occur in the native language. Such phonemes are generally accepted as the biggest learning load for the students and similarly the heaviest teaching problem for the instructor. But there are also structually contrastive relations among the allophones of the two languages and between allophones of one language and phonemes of the other. Such relations must not be ignored either.

II

Some observations about teaching allophones: They do not differentiate meaning. Yet the comparison of allophones in the native language with the allophones of the language to be learned can be as important in its way as the comparison of phonemic charts.[3] Such a comparison of allophones and allophonic systems leads to the basic thesis of this article: some allophones can be important.

Allophones can be important for more reasons than one:

1. Allophones in the native language can occur as separate phonemes in the foreign language and must therefore be separated.

2. They may occur in the native language but not in the foreign language and therefore must be carefully eliminated.

3. Similar phonetic types in the native language and in the foreign language may be distributed differently and therefore the patterns of distribution must be understood and then practiced.

4. Allophones in the foreign language which do not occur in the native language must be learned as a new type of phonetic behavior.

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[3]Yao Shen, "Phonemic Charts Alone Are Not Enough,"*Language Learning*, V (1955), pp. 122-128. Read the pages of this article in the following order: 122, 124, 125, 126, 123, 127, and 128.

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5. Those allophones used to signal two different sets of phonemes in a certain position in the foreign language but only one set of similar phonemes, or neither set, in a similar position in the native language, must be drilled.

Eight various and different types of relation are given in this article to demonstrate that allophones must be taught. Each will be designated as Type..., and the presentation of each begins with a formula to show allophonic and phonemic relations. An example follows the formula to illustrate it. The description of the type ends that specific section. In each formula and its description, capital letters within ( ) represent various languages. Symbols within [ ] represent various allophones. Symbols within / / represent various phonemes. Various allophones of a phoneme are represented by /[...~...~...]/. V means vowel. C means consonant. Throughout the article, ~ means "is in non-distinctive and complementary distribution with". ≠ means "is in distinctive contrast with".

Type 1.  (A)  /[ y  ~  z]/
         (B)  /[y]/ ≠ [z]/

The languages used to illustrate type 1 are Mandarin Chinese and English. The specific example is [w] and [v] occurring in word initial position.

In Mandarin Chinese, [w] in word initial position may vary with [v]. For example: [wən] and [vən] are heard from the same speaker. Either production–whether the upper teeth touch the lower lip or not–has the same referential meaning. When either sequence of sounds given here is produced with the first tone, it means *to review;* with the second tone, it means *to smell;* with the third tone, it means *steady;* with the fourth tone, it means *to ask.* [w] and [v] are phonetically different, but native speakers of Mandarin react to them as the same. [w] and [v] in Mandarin Chinese are allophonically different.

In English, [w] and [v] must be kept separate. /w/ *wine* is not /v/ *vine.* /w/ and /v/ are different, and native speakers of English react to them as different. They are phonemically different. Failure to distinguish the two will cause lexical confusion.

A Mandarin speaker who has not been trained to be aware of the free variation in his native language automatically brings this freedom into English. In language, there is a tyranny of

categories.[4] And this freedom of varying between [w] and [v] in Mandarin is not permitted in English.

Mandarin /w [w ~ v]/
English /w [w]/ ≠ /v [v]/

Unless the native speaker of Mandarin Chinese is aware of the free variation in his native language, he will not be able to produce satisfactory English.

Type 1 can be described as follows: Allophones of a phoneme /[y~z]/ in the native language (A) can occur as two separate phonemes /[y]/ ≠ /[z]/ in the foreign language (B). Native speakers must be made aware of the free variation in their own language before satisfactory production of the foreign language can be called for. The example for type 1 is /[w~v]/ in Mandarin Chinese and /[w]/ ≠ /[v]/ in English.

Type 2.  (A)  /[y ~ z]/
         (B)  /[y]/
         (C)       /[z]/

The three languages taken up here to illustrate type 2 are Mandarin Chinese, Thai, and German. The specific example is again [w] and [v] occurring in word initial position.

In Mandarin Chinese, as we described above, [w] and [v] in initial position are allophonically different /[w~v]/.

In Thai, /w/ occurs in initial position. /v/ does not occur.[5] The Mandarin speaker is accustomed to producing [w] and [v] freely.

Mandarin /w [ w ~ v]/
Thai     /w [w]/

When he learns to speak Thai, he must be first made aware of the fact that there are two different sounds in his native language, although it makes no difference which one he produces. But if he is to speak Thai properly, he must learn to select only the [w] and not the [v] for production. Otherwise, he is not speaking Thai.

In Standard German, /v/ occurs in initial position. /w/ does not occur. When the Mandarin speaker learns to speak German, again he is not free to vary between [w] and [v].

Mandarin /w [w ~ v]/
German        /v[v]/

[4]Joos, op. cit., p. 703.

[5]The informant is Sirabharana Manasandana.

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As in the case of learning Thai, he must make a selection. But what is selected is different. Instead of consciously selecting [w] and eliminating [v] as for producing Thai, he must consciously eliminate [w] and select [v] for producing German. Otherwise, he does not speak German.

Type 2 can be described as follows: Two allophones of a phoneme /[y~z]/ may vary freely in the native language (A) whereas only one of them occurs as a phoneme /[y]/ or /[z]/ in the foreign language (B) or (C). Native speakers must also be made aware of the allophonic difference so that practices can center on the selected phonetic type. The example for type 2 is /[w~v]/ in Mandarin, /[w]/ in Thai, and /[v]/ in German in initial position.

The relationship of [w] and [v] as allophones and phonemes in initial position among Mandarin, English, Thai, and German is as follows:

Mandarin /w [w ~ v]/
English /w [w]/ ≠ /v [v]/

Thai /w [w]/
German /v [v]/

Type 3. (A) /z-[z]/ (B) /z-[y]/
/zC-[zC]/ /zC-[yC]/
/Cz-[Cz]/

There is a similar /p/ in Tagalog and in English. /p/ occurs as a voiceless bilabial stop in both languages. However, in initial position, in Tagalog, whether it occurs singly or as the first member of a cluster, it is unaspirated or with minimal aspiration.[6] It does not occur as the second member of a cluster.[7] In English, when it occurs singly[8] or as the first member of a cluster, it is aspirated. When it occurs as the second member of a cluster, it is unaspirated or with minimal aspiration.

| Tagalog | | English | |
|---|---|---|---|
| [p] | pipíno | [pʰ] | pay |
| [p]1 | pláno | [pʰ]1 | play |
| [p]r | préno | [pʰ]r | pray |

[6]See footnote 2 above.

[7]The examples in Tagalog given in this section of the article are from Aurora L. Asinas and Rosalina A. Morales.

[8]G. L. Trager and H. L. Smith, jr., *An Outline of English Structure* (Norman, Oklahoma, 1951), p. 29.

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| Tagalog | | English | |
|---------|---|---------|---|
| [p]y | piyáno | [pʰ]y | puny |
| [p]w | puwéde | [pʰ]w | Pueblo |
| | | s[p] | spin |
| | | s[p]1 | split |
| | | s[p]r | spread |
| | | s[p]y | spew |

Tagalog speakers must learn to produce the aspirated allophone in English. Unaspirated /p/ occurring singly or as the first member of a cluster in initial position is not English.

Type 3 can be described as follows: An allophone [z] of a phoneme /z-/ in the native language (A) can occur as one of two allophones /[y – z]/ of a similar phoneme /z-/ in the foreign language (B) when the two allophones of this similar phoneme in the foreign language have a rigid distribution. Native speakers must learn to produce the allophone that does not occur in their language. The example for type 3 is the similar /p/ in Tagalog and in English in initial position.

Type 4. (A)  /-z [z]/     (B)  /-z [x – y ~ z]/

We shall again take the similar /p/ in Tagalog and in English. In final position, the Tagalog /p/ is unreleased.[9] The English /p/ is "sometimes aspirated, sometimes unaspirated, sometimes unreleased".[10] It should suffice if the Tagalog speaker produces the unreleased allophone, since it is one of the three free allophones in English. But English speakers are not divided into aspirated /p/ speakers, unaspirated /p/ speakers, and unreleased /p/ speakers. All three allophones occur in the same speaker,[11] although with stylistic difference. The Tagalog speaker has to be prepared to perceive all three phonetic types as "free variants" of the same phoneme. And in order to be able to produce satisfactorily, he must be able to perceive first.

Type 4 can be described as follows: An allophone [z] of a phoneme /-z/ in the native language (A) is one of three free allophones /[x ~ y ~ z]/ of a similar phoneme /-z/ in the

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[9]The informant is Adelaide Paterno.

[10]Bernard Bloch and George L. Trager, *An Outline of Linguistic Analysis* (Baltimore, 1942), p. 42; Trager and Smith, *op. cit.*, p. 31.

[11]Bloch and Trager, *op. cit.*, p. 42.

foreign language (B). The two other allophones [x] and [y] in the foreign language, however, still are desirable acquisitions. The example for type 4 is the similar /p/ in Tagalog and in English in final position.

Type 5. (A) $/[x \sim y]/ \neq /[z]/$
(B) $/[x]/ \neq /[y \sim z]/$

The example for type 5 is the bilabial stops in English and in Mandarin Chinese. We shall consider their occurrence initially before vowels and medially between vowels.

In English bilabial stops, voicing is usually regarded as phonemic; aspiration is allophonic. There are two phonemic bilabial stops: one voiced; one voiceless. The voiced stop has an unaspirated allophone in word initial and medial intervocalic positions, and an unaspirated allophone and an unreleased one in word final position. The voiceless stop has an aspirated allophone in initial position; an aspirated allophone and an unaspirated one in medial intervocalic position; an aspirated allophone, an unaspirated one, and an unreleased one in final position.

In Mandarin bilabial stops, aspiration is phonemic; voicing is allophinic. There are two phonemic voiceless bilabial stops: one aspirated; one unaspirated. In initial position, both types of stops occur. In medial intervocalic position, the unaspirated stop has a voiced allophone, and the aspirated one does not. In final position, no stop occurs.

The present interest is the relationship between the phonemes and allophones of the bilabial stops in English and in Mandarin Chinese in two-syllable words that do not have consonant clusters and that do not end with a stop.

In English, the aspirated allophone of the voiceless bilabial stop occurs before the stressed vowel and the unaspirated allophone occurs before the unstressed or weak vowel. [12] The voiced bilabial unaspirated allophone occurs before both the stressed vowel and the unstressed or weak vowel. For example:

| | | | |
|---|---|---|---|
| $[p^h]$ | u'*p*on | [b] | o'*b*ey |
| $[p^h]$ | '*p*aper | [b] | '*b*aby |
| [p] | '*φ*al | [b] | 'o*b*oe |
| [p] | 'pa*p*er | [b] | 'ba*b*y |

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[12]Trager and Smith, *op. cit.*, p. 29 and p. 32.

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In Mandarin, the bilabial aspirated stop occurs before a stressed vowel or an unstressed vowel when either vowel is in any of the four tones, or intervocalically before an unstressed vowel in the neutral tone. The bilabial unaspirated stop occurs before a stressed vowel or an unstressed vowel when either vowel is in any of the four tones. But intervocalically before an unstressed vowel in the neutral tone, it is voiced.[13] For example:

| | | | | | | |
|---|---|---|---|---|---|---|
| [pʰ] | pŭ 'piàn | 'universal' | [p] | bāu 'bàu | 'wrap newspaper' |
| [pʰ] | ƥí páur | 'fur gown' | [p] | 'ƀáu bù | 'thin cloth' |
| [pʰ] | ƥŭ 'piàn | 'universal' | [p] | ƀāu 'bàu | 'wrap newspaper' |
| [pʰ] | 'pí páur | 'fur gown' | [p] | 'báu ƀù | 'thin cloth' |
| [pʰ] | 'puó po | 'grandma' | [b] | 'buŏ bo | 'a kind of cake'[14] |

The allophonic distribution of the bilabial stops in English and in Mandarin can be given as follows:

English                                        Mandarin

/p/ ⟨ [pʰ] ⟶ /p/
       [p] ⟶
/b/ ⟵ [b] ⟶ /b/
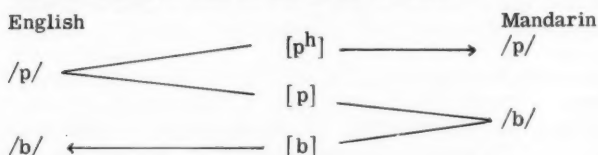
We can also arrange them in the following way:

English                                        Mandarin

[pʰ] ⟶           [pʰ]
[p] ⟶  /p/ ⟵
                 /b/ ⟵  [p]
[b] ⟶           [b]
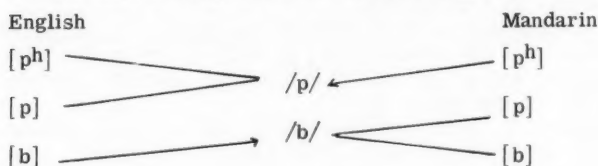
Type 5 can be described as follows: Two allophones /[x∼y]/ in language (A) can correspond to two separate phonemes /[x]/ ≠ /[y]/ in language (B). Two allphones /[y∼z]/ of one of the two separate phonemes in language (B) can correspond to two separate phonemes /[y]/ ≠ /[z]/ in language (A). In other words, the similar phonetic type [y] must be assigned to two different phonemes in two different languages. The distributions of such allophones should be learned. The

[13]Y. R. Chao, *Mandarin Primer* (Cambridge, 1948), p. 28.

[14]Y. R. Chao and L. S. Yang, *Concise Dictionary of Spoken Chinese* (Cambridge, 1947), p. 241.

example for type 5 is the bilabial stops occurring singly in two-syllable words that do not end with a stop, in English and in Mandarin Chinese.

Type 6.　(A)　$/[v \sim w \sim x \sim y \sim z]/$
　　　　　(B)　$/[v]/ \neq /[w]/$
　　　　　(C)　$/[v]/ \neq /[w]/ \neq /[x]/$

The three languages taken up here to illustrate type 6 are Mandarin Chinese, English, and French.

There are five allophones of the high-vowel $/*/$ in Mandarin Chinese. They are: the high-front unrounded $[i]$, the high-back rounded $[u]$, the high-front rounded $[ü]$, the apical $[ʐ]$, and the apical fricative $[ɻ]$. The high-front unrounded and high-back rounded allophones occur as two separate phonemes in English; $[ü]$, $[ʐ]$, and $[ɻ]$ do not occur. An English speaker learning to control Mandarin must acquire the habit of producing $[ü]$, $[ʐ]$, and $[ɻ]$, and he must be able to control all three.

In French, the high-front unrounded, the high-back rounded, and the high-front rounded allophones in Mandarin occur as three separate phonemes; $[ʐ]$ and $[ɻ]$ do not occur. A French speaker learning Mandarin thus needs to control $[ʐ]$ and $[ɻ]$ only . In order to produce the high-vowel in Mandarin, the English speaker must learn to control three allophones and the French speaker must learn to control two. Without being able to control these allophones, neither the English speaker nor the French speaker speaks Mandarin.

Type 6 can be described as follows: Allophones of a phoneme $/[x \sim y \sim z]/$ or $[y \sim z]/$ in the foreign language (A) which do not occur in the native language (B) or (C) must be taught. The example for type 6 is the high-vowel in Mandarin for English or French speakers.

Type 7.　(A)　$/VC_1 \ [yC_1]/$　　(B)　$/VC_1 \ [yC_1]/$
　　　　　　　$/VC_2^* \ [zC_2]/$

The two languages taken up here are English and German. The specific example is the allophonic length of the English vowel.

There are three similar voiceless stops and three similar voiced stops in English and in German.

In English, in word final position, the lengthening of the vowel is automatic when the vowel is followed by a voiced consonant. Conversely, when the consonant is voiceless, the vowel is shorter. In these cases, vowel length in English is allophonic. The examples used here are:

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| cup | $[k^h_\vartheta p]$ | cub | $[k^h_\vartheta \cdot b]$ |
|-----|------|-----|------|
| but | $[b\vartheta t]$ | bud | $[b\vartheta \cdot d]$ |
| duck | $[d\vartheta k]$ | dug | $[d\vartheta g]$ |

In German, both the voiceless and voiced stops occur in initial position. In final position, only the voiceless set occurs. Thus *cup* and *cub*, *but* and *bud*, and *duck* and *dug* are often produced alike by a German learner of English.

In English, pre-pausal "voiced" obstruents have a voiceless final portion; but they are signalled as "voiced" by the allophonic length of the preceding vowel.

If the German speaker brings his native habit of producing the voiceless stops in place of the voiced ones without lengthening the vowel, then *cub*, *bud*, and *dug* will sound like *cup*, *but*, and *duck*. Should he substitute the voiceless set for the voiced one but lengthen the vowel, then the English-speaking listener will react to $[k^h_\vartheta \cdot p]$ $[b_\vartheta \cdot t]$ $[d_\vartheta \cdot k]$ as *cub*, *bud*, and *dug* instead of *cup*, *but*, and *duck*. While it is important to produce both the voiced and voiceless sets of stops in English, it is equally important if not more important here to produce the lengthened vowel. Often when the voiced stops are preceded by a short vowel

$[k^h_\vartheta b]$ $[b_\vartheta d]$ $[d_\vartheta g]$

the English-speaking listener reacts to the voiced stops as the voiceless ones. Although vowel length in English is only allophonic, it must be acquired for producing satisfactory English.

Type 7 can be described as follows: Allophones $/[y \sim z]/$ of a phoneme $/V/$ can be followed by two different sets of phonemes $C_1$ and $C_2$ in the foreign language (A) but one of the allophones $[y]$ is followed by one similar set $C_1$ in the native language (B). Such allophones should be taught. The example for type 7 is the allophonic vowel length followed by voiceless or voiced stops in English for German speakers.

Type 8.　(A)　$/VC_1 [yC_1]/$ 　　　　(B)　$/V [y]/$
　　　　　　$/VC_2 [zC_2]/$

The two languages taken up here are English and Mandarin Chinese. The specific example is again the allophonic length of the English vowel.

There are six stops in English and in Mandarin Chinese. As we have seen in type 7, the English vowel has allophonic length followed by voiceless and voiced consonants. In final position, as we have previously stated, the voiced stop has an

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unaspirated allophone and an unreleased one; the voiceless stop has an aspirated allophone, an unaspirated one, and an unreleased one.

In Mandarin, there are phonemic aspirated and unaspirated stops.   But neither occurs in word final position.   For example:

English                                                        Mandarin

| | | | | |
|---|---|---|---|---|
| cu*p* | /p/ | cu*b* | /b/ | |
| bu*t* | /t/ | bu*d* | /d/ | No final stops |
| du*ck* | /k/ | du*g* | /g/ | |

Proper teaching of English should take up all of the above described allophones of both stops, because all such allophones occur in the same speaker.   In Mandarin, stops are always followed by a vowel, since they do not occur in final position. A Mandarin speaker will produce the English voiced unaspirated allophone and the voiceless aspirated and unaspirated allophones with a vowel following them.[15]   In order to avoid the undesirable automatic production of the vowel, the unreleased allophones can be selected first so that the vowel following the stops will not be permitted to occur.   However, for the listener, it is not easy to hear the difference between the voiced unreleased stop and the voiceless unreleased stop.   Furthermore, English voiced consonants in final position as we said before, end with a voiceless portion.   Thus, without the proper allophonic difference in vowel lengths, *cup* and *cub*, *but* and *bud*, and *duck* and *dug* would sound very similar.   But if the Mandarin speaker lengthens the vowel before either of the unreleased set, the English-speaking listener will react to the set preceded by the lengthened vowel as the voiced set.   As with the German speaker, but with a different reason, the allophonic vowel length in English must be taught to the Mandarin-speaking learner.

Type 8 can be described as follows:  Allophones $/[y \sim z]/$ of a phoneme /V/ can be followed by two different sets of phonemes $C_1$ and $C_2$ in the foreign language (A) but one of the allophones $[y]$ is followed by neither set $C_1$ or $C_2$ in the native language (B).   Intensive drill on the allophones signalling the different sets must be emphasized.   The example for type 8 is the allophonic vowel length followed by voiceless or voiced stops in English for Mandarin Chinese speakers.

A satisfactory theoretical descriptive linguistic analysis of the phonology of any language must not depart from the principle

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[15]Yao Shen, *The Teaching of English in China*  (Taipei, 1955), p. 7.

of "economy". The "smallest number of phonemes" or "the simplest description which accounts adequately and accurately for all the facts is to be preferred". [16] This smallest number of phonemes is arrived at by observing, comparing, and classifying the overt speech-behavior in the language analyzed. The phonetic differences are grouped according to their types and distribution. Allophones are thus established, and finally the phonemes are arrived at.

In applied linguistics, needless to say, a knowledge of the phonemes in both the native language and the foreign language is imperative. Phonemes in the foreign language that do not occur in the native language dare not be overlooked, for they differentiate meaning. But failure to control structurally contrastive relations between the native language and the foreign language can cause confusion. Allophones provide acoustical clues to the recognition of phonemes. By careful utilization, they can constitute an aid to a more satisfactory production of the foreign language.

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[16]Charles F. Hockett, "A System of Descriptive Phonology," *Language*, 18 (1942), p. 9.

# LINGUISTIC ASPECTS OF THE READING PROGRAM[1]

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The reading expert must have more than average compe-
tence in a number of specialized fields—psychology, physiology,
sociology, cultural anthropology.  And of course he must under-
stand the practical problems of educational methodology.

But there is another discipline, directly related to problems
of learning to read, which can help the reading expert to define
those problems and reach practical solutions.  That is the science
of linguistics.  This science tries to deal objectively and sys-
tematically with the nature of language in general and with the
structure of specific languages.  Some of the principles that
have been developed in this field have a direct bearing on the
work of elementary education and adult literacy programs.

It is the purpose of the following remarks to suggest some
of the ways in which an understanding of the nature of language
and its relation to the writing system can contribute to efficiency
in the teaching of reading.

One of the most fundamental principles has to do with the
definition of language.  Entirely apart from the letters and other
symbols used for recording it on paper, every language is a
system by itself, a system primarily for transmitting messages
in which the signals are composed of sounds made with the
human vocal apparatus.  Because we are engulfed in a highly
literate culture, we find it difficult to apprehend the essential
unity and independence of the spoken language apart from the
writing system with which we have been trained to associate it.

But it is precisely in order to establish this association in
the mind of the child learning to read that it is essential for the
teacher to make it clear that language and writing are distinct
systems.  Only in this way is it possible to appreciate the ex-
tent to which the writing is an accurate representation of the

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[1]An earlier version of this paper was drafted by the present au-
thor in 1951 at the Foreign Service Institute under the guidance of Henry
Lee Smith, Jr. , and George L. Trager.  Since then it has been con-
densed and rewritten without the benefit of their advice.  This is its
first published appearance.

language and to recognize the points of correspondence and divergence between the two systems.

Some of the figures of speech we use in speaking about written symbols reveal our essentially visual orientation toward our language. We say for example that the letter *c* has at least two different sounds. We have become so accustomed to this manner of speaking that we forget the real situation and act as if letters actually had sounds. It might help to give our children a more vivid picture of the relation between language and writing if we avoided this mode of expression and said rather that we use the letter *c* in writing to represent two different speech sounds. To say that we "pronounce letters" is a complicated metaphorical way of putting it and tends to create in the student's mind an erroneous conception of language.

As a result of this confusion, students in the upper grades and in college tend to regard written forms as a pure and ideal language, of which spoken forms are a degraded imitation. By reversing this point of view, we can make a conscious effort to think of the printed page as an imperfect record or reminder of actual speech. Thus we may be able to enhance the prestige of the spoken word and perhaps pave the way to a keener appreciation of language as a medium of artistic expression.

As an example of our failure to distinguish between language and writing, consider the meaning of the terms "vowel" and "diphthong." Are these sounds or written symbols? When the reading manuals tell us about "long" and "short" vowels, they must be referring to sounds. Therefore, in order to make it clear at all times whether we are talking about the language or the writing system, it would seem advisable to refer to the symbols *a, e, i, o, u* as "vowel letters." The *ai* in *said* and the *ea* in *head* might be called "combinations of letters." Then the terms "vowel" and "diphthong" could be reserved exclusively for reference to sounds or combinations of sounds.

In our campaign for a better understanding of what language means, one thing we can do is appeal to the textbook writers not to make statements about the writing system as if they were describing the language. Students have enough trouble finding out what English is like; it only adds to their difficulties if they are told that "there are twenty-six letters in the English language."

In this connection, we might also re-examine the doctrine of silent letters, and consider how this term is used in describing the correspondences between speech and spelling. For example, since the sound of *n* is sometimes represented by the letters *kn*, as in *know*, one might choose to say that the sound

of *n* is represented in such cases by the letter *n* preceded by a silent *k*. Notice that this is a special technical use of the term "silent," applied to letters that do not correspond to any sound in the spoken word.

But even this specified use of the term is difficult to apply consistently. The *y* in the graphic form *pay,* for example, cannot be regarded as a silent letter, since it corresponds to the actual *y*-like sound heard at the end of this word. If we say that the *y* in *pay* is silent, we could also say that the *n* in *pan* is silent and that *a* before "silent *n*" represents a special sound. The question of the *w* in *know* and *now* presents a similar problem: we can hardly say that the *w* is silent, since it does stand for an actual sound that appears at the end of the words represented by these spellings.

The concept of silent letters may be a convenient one, but the term is misleading; it cannot be defined with any precision; and the usefulness of the idea in the teaching of reading has been seriously limited by its wide misapplication.

A more practical problem in our appraisal of the reading program is that of isolating and defining the essential task that the pupil faces in acquiring this skill. It appears from the teaching manuals that a considerable amount of time and effort is expended in teaching the children to distinguish different sounds, meanings, and grammatical forms. This seems like a needless diversion from the central goal of teaching them to read. The most reasonable thing would be to proceed directly to the essential matter of associating sequences of letters with sequences of sounds. In dealing with normal children, we can assume that they already have adequate control of the sound system and the grammatical structure of their native language.

After learning to read, of course, children will enrich their knowledge of the language by enlarging their vocabulary. They will learn hundreds of new words and idioms through their reading both in school and out. But in the early stages of learning to read, the purpose is not to add to the child's stock of words. In fact, most modern primers expressly avoid words that are not likely to be familiar. This is in accord with the primary goal of simply learning to read words that they already have in their speech.

In view of this it seems rather wasteful to spend time and effort "clarifying the meanings" of words like *this, that, it, he, she, they, but, so, is, was, ride, etc.* The meanings of such words have been firmly and permanently established in the child's mind long before he comes to school and are constantly being reinforced by dozens of repetitions every day. What is the use

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of teaching the child something he already knows? Once the association has been established for the pupil between the written form *ride* and the speech signal that this form represents, the reading problem is over. To explain that this word is in some environments a verb and in others a noun is wasted effort. The child is fully aware of that if he speaks English. To be sure, he may not know the terms verb and noun, but the technical terminology of grammar is irrelevant at this stage.

Another activity that is puzzling to those interested in the reading program is the training given in "auditory perception." It must be assumed that the children know English when they come to school, and exercises designed to develop auditory perception of sounds in the language do not seem appropriate in the process of learning to read.

A sample exercise of this sort is described as follows: "To promote auditory perception of the long and short sounds of the letter *i*, pronounce the following words and have the pupils tell whether they hear a long or a short *i* in each word: *find*, *fine*, *Bill*," etc. Obviously no child is going to have difficulty distinguishing the sounds of such words. If he did, he would not be able to speak English. Apparently the object of such an exercise is to train the child to use the terms "long" and "short" in this special technical sense, rather than to promote auditory perception.

Some of the exercises that have been used in the interests of auditory perception involve more than a mere waste of time; they involve the danger of intolerance in matters of dialect variation due to geographical origin. In these days when families move about the country a good deal, we must be prepared for the kind of situation in which one child may distinguish *pin* and *pen* for example, and another may not. In the latter case, it simply means that the child speaks a variety of English in which these two words sound the same, and the only reasonable course is to accept the fact and realize that we cannot change his natural speech. Many of us do not distinguish *whale* and *wail*, *cot* and *caught*, or *morning* and *mourning*; and it would be useless (if not un-American) to insist that a child should make such distinctions artificially if they are not part of his regional heritage. In all such matters, children will imitate their contemporaries, in spite of any effort on the teacher's part. We can teach them to read, but we cannot change the phonetic structure of their language.

Some linguists have carried to an extreme this attitude of tolerance toward dialectal variation and have earned a reputation of radicalism because of it. It is also true that some of

them, in their enthusiasm for linguistics, have tried to give the impression that teachers of English and reading would do well to forget about the psychologists and the specialists in elementary education and let the linguists take over. It would be unfortunate if the critical comments made here were interpreted as support- ing such extremists. The only point is that the language spe- cialists really have made certain contributions toward the build- ing of a broad conceptual framework for dealing with language problems and that some of the tasks of elementary education thus appear to be more clearly defined.

One thing that comes into sharper focus is the idea that language is a matter of speech activity—the way people talk. Writing is an irregular and fragmentary notation to serve as a reminder of what has been said. A better understanding of the nature of language and the relationship between language and writing can help all of us—teachers, textbook writers, or just plain citizens—to see more clearly what the learner faces in striving toward literacy and can make for greater efficiency in achieving that goal.
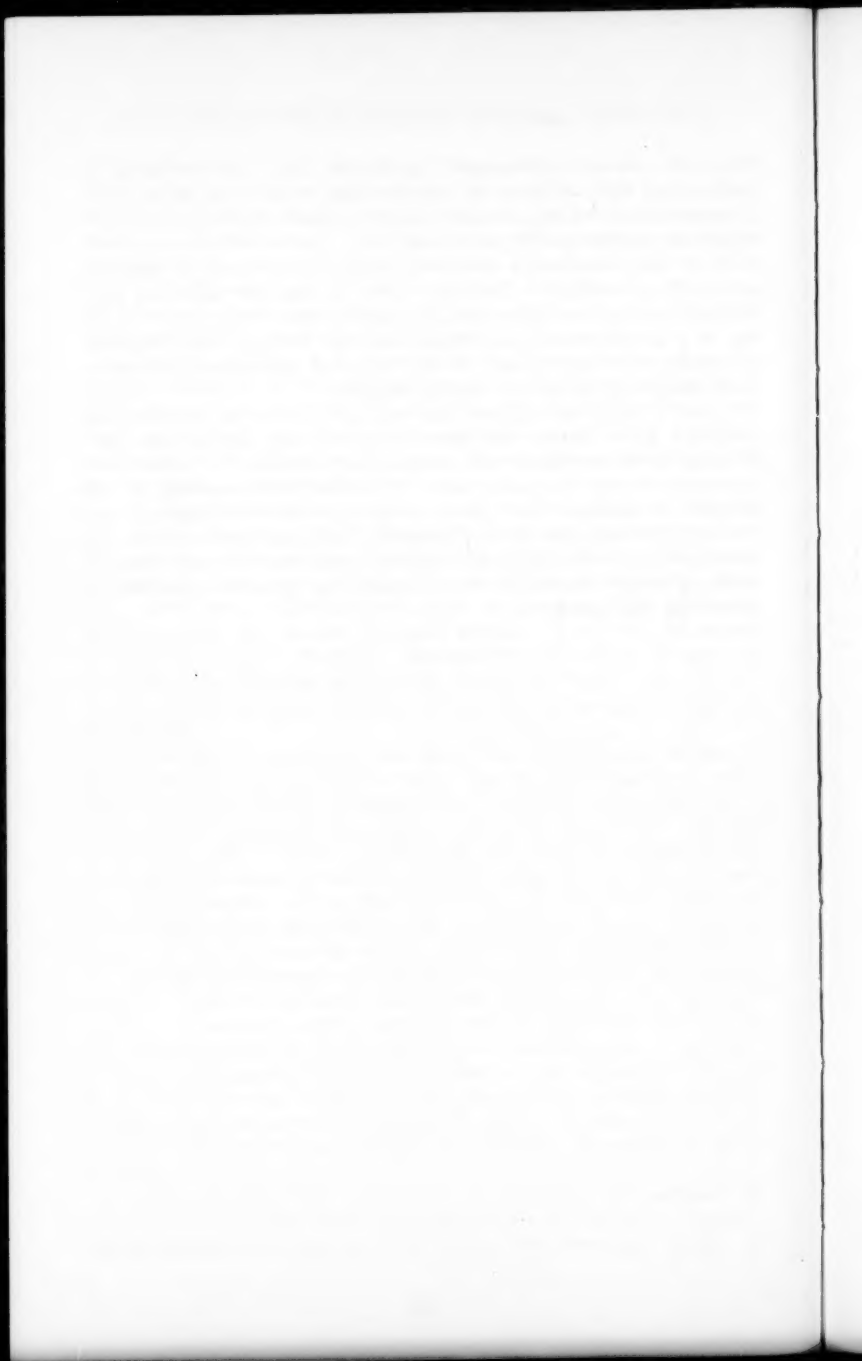
# A CONTRASTIVE STUDY OF EGYPTIAN ARABIC AND AMERICAN ENGLISH: THE SEGMENTAL PHONEMES

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It has become widely accepted among linguists that materials to be used in teaching English as a foreign language should be based on a comparison of the native language and the target language English.   Such a comparison, which includes both the phonology and the grammar, is essential because it locates the areas of difficulty for the learner (the Thai does not have the same problems learning English as the Turk), and because it makes possible proper grading.   The well-known materials prepared by the English Language Institute of the University of Michigan (specifically, for native speakers of Spanish to English) were guided by this assumption.   Fries has expressed the basic concepts as follows:

> The most effective materials are those that are based upon a scientific description of the language to be learned, carefully compared with a parallel description of the native language of the learner. [1]

Lado's recent book, *Linguistics Across Cultures,* elaborates this assumption, as a glance at the chapter headings will show:   "How to Compare Two Sound Systems," "How to Compare Two Grammatical Structures, " etc.   Hill, in his preface to the report on the Ann Arbor Conference on Linguistics and the Teaching of English as a Foreign Language, says:

> There are many statements in the pages of the Conference report on the need for structural comparisons of English and various other languages, and the construction of teaching materials based on such comparisons.[2]

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[1]Charles C. Fries, *Teaching and Learning English as a Foreign Language* (Ann Arbor, 1945), p. 9.

[2] *Language Learning,* Special Issue (June, 1958), p. 4.

However, the classroom teacher, the "practitioner" who is often faced with the necessity of preparing teaching materials, searches in vain for the comparisons that he needs.[3]  And if he himself wants to make the comparisons, he discovers that there are relatively few analyses available.  Further, many of these are so technical that they are not accessible to the non-specialist.

This paper presents, for the practitioner or non-specialist, a contrastive[4] study of the segmental phonemes (consonants and vowels) of Egyptian Arabic and American English.[5]  The primary materials on which this study is based are: (1) recent analyses of English, chiefly the one that has come to be known as Trager-Smith;[6] (2) the analysis of Arabic by Harrell,[7] and (3) the manual by Twaddell for Egyptian elementary school teachers of English.[8]  All of these have been supplemented by our own observations made in the teaching of English to Egyptian secondary school and university students.

## CONSONANTS

In the labial to velar regions, English has twenty-three (or twenty-one, depending on how affricates are analyzed,) consonants.  Arabic, in the same regions, has only sixteen.  On the other hand, in the post-velar regions Arabic has seven consonants, but English only one.  The details are given in the following chart.

[3]A few such comparisons, limited to the segmental phonemes, have been published; see, e.g., David W. Reed, Robert Lado and Yao Shen, "The Importance of the Native Language in Foreign Language Learning," *Language Learning* I (January 1948), 17-23.

[4]Because the more obvious term *comparative* is already used as a technical term—comparative linguistics, comparative method—it seems unwise to extend its use to cover studies such as this.  Hence the term *contrastive* is suggested.  Charles F. Hockett's definition would seem to include this use; see his "Implications of Bloomfield's Algonquian Studies," *Language* 24. 119 (1948).

[5]Hereafter *Arabic* will mean colloquial Egyptian Arabic and *English* American English.

[6]George L. Trager and Henry Lee Smith, Jr., *An Outline of English Structure* (Norman, Okla. , 1951).  For a discussion of this and other analyses, and their antecedents, see the review by James Sledd of Trager and Smith, *Outline*, and Fries, *Structure of English*, in *Language* 31. 312-45 (1955).

[7]Richard S. Harrell, *The Phonology of Colloquial Egyptian Arabic* (New York, 1957).

[8]W. Freeman Twaddell, *Oral Practice in Elementary English Instruction* (Cairo, 1956).

|         |   |   |   |   |   |   |   |   |
|---------|---|---|---|---|---|---|---|---|
|         |   |   | t |   |   | k | q |   | ? |
|         | b |   | d |   |   | g |   |   |
|         | f |   | s |   | š̌ | x | ḥ |   |
|         |   |   | z |   | (ž̌) | ġ | ʕ |   |
| Arabic  | m |   | n |   |   |   |   |   |
|         |   |   | l |   |   |   |   |   |
|         |   |   | r |   |   |   |   |   |
|         |   |   |   |   | y | w |   |   | h |

|         |   |   |   |   |   |   |   |
|---------|---|---|---|---|---|---|---|
|         | p |   | t | č̌ | k |   |   |
|         | b |   | d | ǰ̌ | g |   |   |
|         | f | Θ | s | š̌ |   |   |   |
| English | v | ð | z | ž̌ |   |   |   |
|         | m |   | n | ŋ |   |   |   |
|         |   |   | l |   |   |   |   |
|         |   |   | ɹ | y | w |   |   | h |

The so-called emphatics of Arabic have been omitted because of the different analyses possible (as additional consonants or as a prosodic feature—the latter in Harrell, op. cit., §§8.7-8), and because they do not generally constitute a problem in the learning of English.

In the following discussion, the consonants are grouped according to point of articulation. At each point the order is: stop, spirant, nasal, lateral, trill, semivowel. Not all of these types, of course, occur at all points; e.g., labials are only stop, spirant, and nasal.

#### *Labials*

| Arabic  | - | b | f | - | m |
|---------|---|---|---|---|---|
| English | p | b | f | v | m |

This table indicates that the speaker of Arabic will have difficulty with English contrasts such as *pan/ban*, *fan/van* ,

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*cap/cab, half/have*. In addition, he will also have difficulty with *pan/fan* and *ban/van*. The English *b/v* contrast as in *habit/have it, robing/roving* is further complicated not only because Arabic has no such contrast, but also because Arabic /b/ has a free variant [b] intervocalically. Consonant clusters as in *caps, kept, halves, halved* are not generally a source of difficulty because Arabic /b/ has another free variant [p] before voiceless obstruents, and /f/ has a free variant [v] before voiced obstruents.[9]

### Interdentals

| Arabic | - | - |
|---|---|---|
| English | θ | ð |

/θ/ and /ð/ do not occur in Arabic, and Arabic speakers substitute /s/ and /z/ respectively. Hence English contrasts such as *thistle/this'll, ether/either, thing/sink, bath/bass, breathe/breeze* are all troublesome. The occurrence of /θ ð/ in classical Arabic complicates the problem; although the learner has been exposed to these sounds in the study of Arabic, he has usually substituted /s z/ while laboring under the illusion that he was saying something else. He may also have had teachers of English who identified English /θ ð/ with classical Arabic /θ ð/, not realizing that in all probability Arabic speakers regularly substituted /s z/ for these when reading or speaking classical Arabic.

### Dentals

| Arabic | t | d | s | z | n | l | r |
|---|---|---|---|---|---|---|---|
| English | - | - | - | - | - | - | - |

### Alveolars

| Arabic | - | - | - | - | - | - | - |
|---|---|---|---|---|---|---|---|
| English | t | d | s | z | n | l | ɹ |

[9]Since Arabic /b/ and /f/ both have voiced and voiceless allophones, and /b/ has stop as well as spirant allophones, the primary contrast here is not voiced/voiceless or stop/spirant, but bilabial/labiodental.

Arabic /t,d/ etc., are dental and English alveolar. However, this difference does not constitute a major problem in the learning of English, since substitution of the dentals for the alveolars does not materially affect or impair communication in English. The extent to which this difference is a problem varies directly in proportion to the degree of native-like control which is expected or demanded.

Arabic /l/ is "clear" or i-colored, and hence the u-colored allophones in English *full, fall, bottle,* etc., are troublesome. Arabic /l/ and /r/ have voiceless allophones prepausally following voiceless obstruents, and the nasals may have voiceless allophones in the same environments, but in practice these differences do not constitute learning problems.

The conventional use of *r* in the transcription of Arabic and English completely obscures the fact that the sounds so symbolized in the two languages are entirely different; in Arabic *r* represents an apical trill, in English a slightly retroflex resonant continuant (a vocoid). To highlight this difference, (following IPA) /ɹ/ is here used for English, and /r/ for Arabic. Arabic speakers have difficulty with /ɹ/ in all environments and substitute /r/, which is (probably) least acceptable to speakers of English in items such as *bird, shirt, fur, her.*

*Palatals*

| Arabic | | | š | (ž) | y |
|---|---|---|---|---|---|
| English | č | ǰ | š | ž | y |

Even though Arabic does not have affricates which can be interpreted as structural units, English /č/ causes relatively little difficulty because Arabic has the noninitial sequence /tVš/ which alternates with /tš/.[10] Hence English *watch/wash* , *watching/washing* are not troublesome, although initial contrasts such as *chin/shin* may be. Arabic /ž/ is statistically very infrequent, and some speakers do not have it at all; its occurrence is limited to a few relatively unassimilated borrowings. The possible sequence /dž/ has not been observed; therefore, as would be expected, Arabic speakers have more difficulty with English /ǰ/ and contrasts such as *chump/jump, version/virgin.*

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[10]For this reason it is advisable to use the symbols /tš/ and /dž/, rather than /č/ and /ǰ/, in English transcriptions for speakers of Arabic. The use of the latter symbols invites gratuitous pronunciation problems.

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These statements about difficulties with English /ǰ/ hold for lower Egyptian dialects (roughly, Cairo and vicinity and the Nile delta); they do not hold for upper Egyptian dialects with an affricate /ǰ/ which patterns as a unit.[11]  In these dialects the sequence /tš/ (alternating with /tVš/) also occurs, and, as in the case of lower Egyptian, it cannot be interpreted as a unit. In contrast with English, at this as well as several other points the Arabic consonant system is markedly asymmetric.

*Velars*

| Arabic | k | g | – | w |
|--------|---|---|---|---|
| English | k | g | ŋ | w |

Since Arabic [ŋ] is an allophone of /n/ before velar obstruents, English /ŋ/ in this environment is not difficult. Hence English *sink, sank, finger, longer* are no problem, but contrasts such as *sin/sing, sinner/singer, lawn/long* are.  And items such as *sinning, singing* are extremely difficult.[12]

*Uvulars, Pharyngeals, Laryngeals*

| Arabic | q | x | g | ħ | ʕ | ʔ | h |
|--------|---|---|---|---|---|---|---|
| English | – | – | – | – | – | – | h |

For the speaker of Arabic, English presents no problems at this point.  (The problems are all in the other direction!)

## CONSONANT SEQUENCES

Arabic has no sequences of more than two consonants, whether in close transition or with intervening juncture.[13]  Since

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[11]Although historical details are beyond the scope of this paper, it may be relevant to indicate that the upper Eg. /ǰ/ corresponds distributionally to lower Eg. /g/, and upper Eg. /g/ to some occurrences of lower Eg. /ʔ/; e.g., upper Eg. /ǰabal/, /gahwa/ and /saʔal/ are /gabal/, /ʔahwa/ and /saʔal/ (respectively, 'mountain,' 'coffee,' and 'he asked') in lower Eg.

[12]The *n/ŋ* contrast seems to be much more difficult for Arabic speakers than, e.g., *p/b*, although there is no immediately obvious reason why this should be so.

[13]Harrell, *op. cit.*, §6.5.2.

English has as many as four consonants in close transition, and as many as six or seven with intervening juncture,[14] the Arabic speaker has obvious difficulty with English consonant sequences and supplies intrusive vowels which act as "cluster breakers."

The details of Arabic and English consonant sequences are summarized in the following table.

|         | *Initial* | *Medial* | *Final* |
|---------|-----------|----------|---------|
| Arabic  | C         | C        | C       |
|         |           | CC       | CC      |
| English | C         | C        | C       |
|         | CC        | CC       | CC      |
|         | CCC       | CCC      | CCC     |
|         |           | CCCC     | CCCC    |

*Initial* here means either after pause or after juncture, and *medial* means intervocalic with no intervening juncture. *Final* means either before pause or before juncture for English, but only before pause for Arabic. Before juncture, Arabic has a maximum of one consonant; utterance final CC is CCV before juncture.

Although the speaker of Arabic does not have initial CC, in practice he has very little difficulty with English CC in this or any other environment. CCC initially is usually reproduced as CVCC, finally as CCVC, and medially as CVCC or CCVC, with an intrusive vowel (predominantly /i/ or /ɨ/) as indicated. CCCC medially is usually reproduced as CCVCC, and finally as CCVCC or, more often, CCCVC, the latter with the point of syllable division after the second consonant. Still longer sequences, as in ca*rved str*aight, are similarly "broken up."[15]

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[14]Hockett, *Manual of Phonology* (Baltimore, 1955), p. 63. For more details as well as examples, see also Archibald A. Hill, *Introd. to Linguistic Structures* (New York, 1958), pp. 68-88.

[15]Since in every instance the extent to which a sequence is difficult depends on the constituent consonants and their order, as well as the length of the sequence, a more detailed presentation would require an exhaustive list of English and Arabic consonant sequences and (almost) individual discussion. Such a list, which unfortunately is based on analyses which disregard juncture in both English and Arabic, has been published for American English and Iraqi Arabic; see Alice Paul

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## VOWELS

### Simple Nuclei

| Arabic | | | English | | |
|--------|---|---|---------|---|---|
| | | | i | ɨ | u |
| i | | u | | | |
| | | | e | ə | o |
| | a | | | | |
| | | | æ | a | ɔ |

The phonemically simple nuclei in Arabic and English are similar in that both sets are phonetically short and lax. The main, and pedagogically most important, difference is the number of contrasts. Since Arabic has fewer contrasts, the range of allophonic variation of each vowel phoneme is much greater than in English; e.g., Arabic /a/ has allophones within the area bounded by [ɛ], [æ], [ɑ] and [ʌ], and hence English contrasts as in *bet/bat, cat/cot, cot/cut, cot/caught* are all difficult. In fact all contiguous pairs on the English vowel chart are troublesome: *bit/bet* and *bet/bat* are, but *bit/bat, fit/foot,* and *foot/fought* are not.

### Complex Nuclei

Arabic

| i: | | u: |
|----|---|----|
| e: | | o: |
| | a: | |

English



Arabic has fewer phonemically complex nuclei than English.[16] Further, these nuclei are phonetically long and tense monoph-

Malick, "A Comparative Study of American English and Iraqi Arabic Consonant Clusters," *Language Learning* VII, no. 3-4 (1956-57), 65-87.

[16] The list of English complex nuclei in the above chart is obviously incomplete. However, it adequately illustrates the differences between the Arabic and English systems.

thongs. Hence the speaker of Arabic tends to substitute his tense monophthongs for the English diphthongs /iy ey uw ow/. The degree of native-like control expected determines the extent to which this substitution is a problem. English /ay aw/ are not difficult, since they are phonetically similar to Arabic (phonemically vowel-consonant) sequences /ay/ and /aw/. Even though he does not have anything similar to English /oy/, this nucleus is relatively easy for the Arabic speaker to learn.

English /i/ and /u/ are (for most speakers) slightly higher than the corresponding Arabic vowels. For this reason, English /i u/ tend to be identified by speakers of Arabic with their /i: u:/ and reproduced accordingly; thus contrasts such as *bit/ beat* and *could/cooed* are difficult.

Another English contrast which is particularly troublesome is that in *caught/coat, bought/boat*. The Arabic speaker tends to substitute his /o:/ for both.

## SUMMARY

The speaker of Arabic has difficulties with the segmental phonemes of English because of (1) differences in the number of contrasts, (2) differences in the permissible sequences, and (3) differences in the phonetic expression of "similar" contrasts. English has many more vowel contrasts, and more consonant contrasts in the labial to velar regions than Arabic. It also permits much longer sequences of consonants initially, medially, and finally in utterances. Both English and Arabic have consonants which are conventionally symbolized /t d s z/. In English, however, these represent alveolars, whereas in Arabic they represent dentals. All of these differences constitute a major (although not the only) source of difficulty for the speaker of Arabic learning English.[17]

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[17]The authors intend, in subsequent papers, to continue with a contrastive study of the suprasegmentals and the grammars of the two languages.

# A TEST FOR PREDICTING PHONETIC ABILITY

## Eunice V. Pike
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1. This is a report of a pilot test for the grouping of phonetic students according to potential ability. The pilot experiment was conducted at the English branch of the Summer Institute of Linguistics in 1956 with 88 students, and repeated at Norman, Oklahoma, in 1958 with 101 students. The test was inspired by a desire to have — before the classes began — a classification of students with regard to their potential phonetic ability. Experience has proved that students seem to make better progress if grouped according to ability. Formerly students were placed in class alphabetically and then re-grouped, after a period of two weeks, on the basis of class performance. It was decided to experiment with a test which would obviate this two week period. The following is a description of the test and its results.

2. The test was an oral one, and did not take more than three minutes per student. Orientation—a smile, a word of greeting, instructions—was included in those three minutes.

In order to keep the grading uniform (three different teachers were giving the test simultaneously), only one factor of each item was considered pertinent for a right or wrong answer.

The student was told to mimic the teacher in the pronunciation of each of the following:

1. 'sẹfi (To receive credit, the first vocoid had to be nasalized.)

2. ačO (To receive credit there could be no voicing between the č and the voiceless O.)

3. apo (To receive credit the fricative contoid had to be bilabial.)

4. aMma (To receive credit there had to be a voiceless nasal.)

5. žup·a (To receive credit there had to be a phonetically long bilabial stop.)

6. x^m  xir  ("come here") (To receive credit there had to be two voiceless velar fricatives instead of a velar stop and "h".)

7. òóè (To receive credit the pitch had to be low-high-low.)

The next section of the test had items which were not to be mimicked but which tested the student's ability to control his vocal apparatus in accordance with instructions.

8. The student was told to say the phrase "this way' with a falling pitch. The teacher gave the instructions with a rising pitch. To receive credit the student had to pronounce it with falling pitch.

9. The student was told to pronounce three t's, one after the other. To receive credit there could be no voicing between the various t's.

10. The student was showed the word "allow" and told to blow as he said the letter "l". To receive credit there had to be a voiceless lateral.

11. The student was told to say "hello" while drawing the breath inward.

In the following section the students were told to read the following:

12. ah-h-h The student was told to be sure and pronounce the "h". (To receive credit the syllable had to be pronounced $[aA\cdot]$.)

13. sooo ssslow (To receive credit the s had to be long.)

14. tsa (To receive credit there had to be close transition between the t and the s.)

The highest score possible was 28. A student received two points for each item which was correct on his first utterance. If he made a mistake the first time, the teacher repeated and he tried again. If right the second time, he received one point. If wrong the second time, he received no credit.

3. Of the 88 students, one made a perfect score, two had 27 points, four had 26, five had 25, nine had 24, seven each had 23, 22, and 21, five had 20, nine had 19, four had 18, seven had 17, five had 16, one had 15, five had 14, one had 13, two had 12, one had 11, two had 10, one each had 9, 8, 7, and 5.

The students were placed into sections according to the results of the placement test. It was soon noted that the test had served its purpose. For the most part the sections were uniform, the fastest students were in certain sections, and the slowest students in others. However, because there was an occasional misfit, adjustments were made two weeks later.

After about forty-five classroom hours of phonetics the students were given a final grade based on their ability to take dictation, to pronounce sound sequences, and to understand

## A TEST FOR PREDICTING PHONETIC ABILITY

phonetic theory. In Table One these grades are compared with the results obtained in the three minute placement test. The final grade is given by letter in the left hand column. In the succeeding columns, the number of students receiving those grades are listed in accordance with the particular quarter of the class into which they fell in the initial placement test.

Table One, England

| Final course grade | Number of students as they fell in the various quarters of the placement test. | | | | Total number of students |
|---|---|---|---|---|---|
| | First | Second | Third | Fourth | |
| A | 4 | | | | 4 |
| A- | 3 | | 1 | | 4 |
| B+ | 5 | 6 | | | 11 |
| B | 5 | 3 | 1 | 2 | 11 |
| B- | 2 | 2 | 2 | | 6 |
| C+ | 1 | 2 | 3 | 5 | 11 |
| C | 1 | 8 | 12 | 1 | 22 |
| C- | | | 3 | 5 | 8 |
| D | | | 1 | 2 | 3 |
| D- | | | 1 | 3 | 4 |
| F | | | 1 | 3 | 4 |
| | 21 | 21 | 25 | 21 | 88 |

These relationships may be seen better as they are graphed in Graph One. The solid line on the chart represents all those students who were in the top quarter in the placement test. The horizontal position of the solid line shows what those students received as their final grade for the course. The vertical height of that line shows what percentage of the students receiving that grade were from the top quarter. Notice that all those who received A, and all but 25% of those who received A- were from that top quarter.

The broken line indicates those in the second quarter of the placement test. Those students received B+ through C for

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final grades. Notice that there were none with A or A- and none with C-, D, or F.
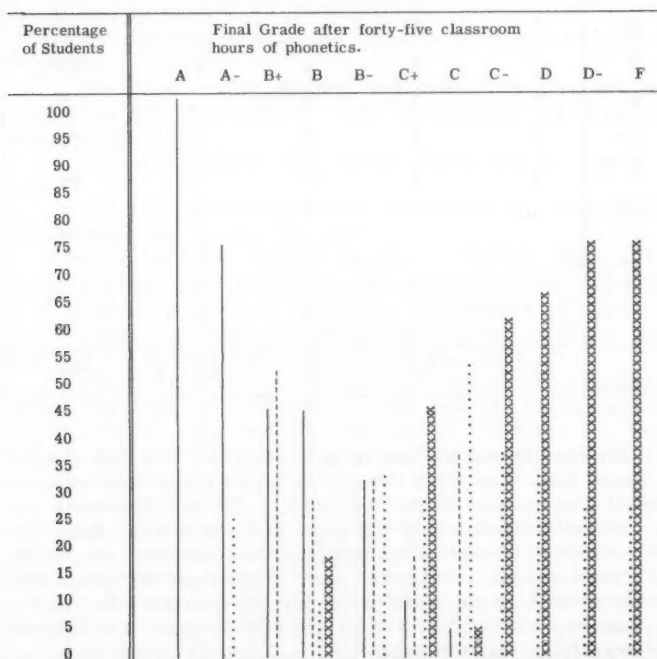
The dotted line indicates those in the third quarter of the placement test. The majority of those students received C, but there was one A-, one B, two B-, and one D, D- and F.

The xxxxxxxx's indicate those in the bottom quarter of the placement test. Only two people in that quarter received B, all others were C+ or below, including three D- and three F.

The placement test was successful in that by means of it we were able to predict most of those students of A and A- caliber, as well as the extreme bottom of the class. It was not completely reliable, however, in that some of the students

GRAPH ONE--ENGLAND

Correlation of Ranking by Placement Test and by Classroom
Performance

| Percentage of Students | Final Grade after forty-five classroom hours of phonetics. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | A | A- | B+ | B | B- | C+ | C | C- | D | D- | F |

Percentage of students receiving the indicated class-room grade, who in the placement test were in the top quarter _____; in second, -----; in third, ......; in fourth, xxxxx.

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finished with lower grades than we had expected, and some with higher.

4. In the summer of 1958 Miss Lillian Howland and her staff gave the same test to 101 students in Norman, Okla. The final course grades and the placement test results were as indicated in Table Two. The relationships between the two have been graphed in Graph Two.

Table Two, Norman

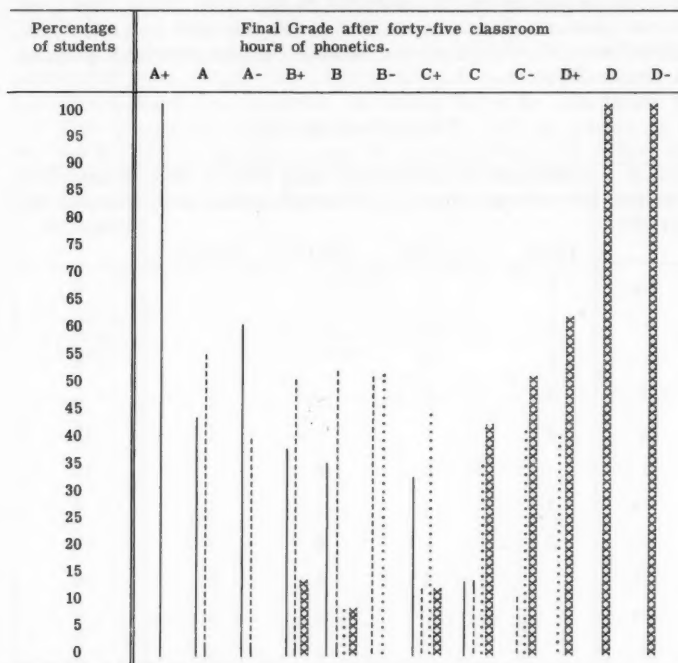| Final course grade | Number of students as they fell in the various quarters of the placement test. | | | | Total number of students |
|---|---|---|---|---|---|
| | First | Second | Third | Fourth | |
| A+ | 4 | | | | 4 |
| A | 4 | 5 | | | 9 |
| A- | 3 | 2 | | | 5 |
| B+ | 3 | 4 | | 1 | 8 |
| B | 6 | 9 | 1 | 1 | 17 |
| B- | | 6 | 6 | | 12 |
| C+ | 3 | 1 | 4 | 1 | 9 |
| C | 2 | 2 | 6 | 7 | 17 |
| C- | | 1 | 4 | 5 | 10 |
| D+ | | | 2 | 3 | 5 |
| D | | | | 1 | 1 |
| D- | | | | 4 | 4 |
| | 25 | 30 | 23 | 23 | 101 |

Notice that only students who were in the top half of the placement test received A as a final grade for the course, and only those in the bottom half received D. However, some in the top quarter received B and C, and a few in the bottom quarter received B.

5. The product-moment correlation between scores on the pilot test and on the grades obtained in the phonetics course was .69 for the first group and .71 for the second group. Both cor-

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GRAPH TWO—NORMAN

Correlation of Ranking by Placement Test and by Classroom
Performance

| Percentage of students | Final Grade after forty-five classroom hours of phonetics. | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | A+ | A | A- | B+ | B | B- | C+ | C | C- | D+ | D | D- |



Percentage of students receiving the indicated classroom grade, who in the placement test were in the top quarter _____; in second -----; in third .....; in fourth xxxxx.

relations are significant at the 1% level.    These correlations are
high for such a short test.    It should be noted that the test does
not reflect already-achieved phonetic proficiency—i. e. the ability
to analyze, transcribe, and pronounce sounds of various types—
but rather a complex of aptitude, flexibility, general experience
and training, which allow one to pursue profitably a course lead-
ing to the development of such ability.    On the basis of these
correlations we can say that from 47 to 50% of the variance of
final grades is related to variance of placement test quartile
rankings.

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Some of the factors which may have caused a difference between the placement test grade and the final grade are illness, nervousness at the time of the test, industry or drive on the part of the student.

One of the main drawbacks of the test is that an element of surprise is necessary. This surprise was difficult to maintain because even though each individual test was short, it took considerable time to administer a hundred of them and the students who had taken the test were not segregated from those who had not. If a student learned about numbers 10 and 11 and practiced before the test, he may have appeared to be better than his ability warranted. If in the future the test were revised to include more materials, the necessity for surprise would be lessened.

It should be noted that the placement test both in England and in Oklahoma gave useful results in spite of the fact that all kinds of students were included in the test—namely, those with no previous phonetics, those who had studied some phonetics, those with various language backgrounds. I conclude from these two trials that a fairly reliable placement test for phonetics and language mimicry is a possibility.

# PREPARATION OF TEACHING MATERIALS, PRACTICAL GRAMMARS, AND DICTIONARIES, ESPECIALLY FOR FOREIGN LANGUAGES*

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The most important new developments in the preparation of materials for the teaching of language, especially for the teaching of a foreign language, have shown themselves in the practical use of the modern linguist's techniques of descriptive structural analyses.

1. The first step in this approach to the preparation of teaching materials has been the making of a satisfactory descriptive structural analysis of the language to be learned. The modern scientific study of language has, within the last thirty years, developed special techniques of descriptive analysis by which a trained linguist can efficiently and accurately arrive at the fundamentally significant matters of structure and sound system amid the bewildering mass of details which constitute the actual rumble of speech. The person who is untrained in the principles and methods of language analysis is not likely to arrive at sound conclusions concerning the actual practices of the speakers he observes. He will certainly not do so efficiently and economically. And the native speaker of a language, unless he has been specially trained to analyze his own language processes, will be more likely to mislead than to help when he tries to make comments about his own language.

In order to provide an adequate guide for the preparation of teaching materials the descriptive analysis of the language to be learned must include also the significant differences as distributed among the important geographical areas and social classes.

2. A second step in this approach to the preparation of teaching materials (not practiced by all those who insist upon the "first step") has been the making of a parallel descriptive structural analysis of the language of the learner. There has been a growing recognition of the necessity of making a careful, systematic comparison of the descriptive structural analysis of

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the native language of the learner with a similar analysis of the language to be learned, as the means of predicting the special centers of difficulty for which the materials must be prepared. A great deal of evidence points to the conclusion that the habits that constitute the control of one's native language are not habits concerning items as items but habits concerning an ordered system of structural contrasts and that these automatic habits through which we manipulate our native language signals with such speed and precision have developed blind spots for con- trastive features outside our particular code.

This conclusion has great significance for the preparation of practical teaching materials. In the first place it means that learning a second language after having developed great skill in the habits of our native language is a very different matter from learning our first language when no such habits had been set up. The materials for teaching a second language cannot follow the so-called "natural" method by which a child learns his first language. To be efficient the practice of the learner cannot be left to chance as in free conversation but must systematically make provision for overcoming the special difficulties set up by these blind spots.

In the second place it means that a different set of teach- ing materials must be prepared for each linguistic background. English, for example, has, of course, its own special set of language signals, but these particular language signals present very different problems for those whose native language is German and those whose native language is Japanese. Even for the speakers of languages as close together as Spanish and Portuguese, English has a considerable range of very different problems.

3. A third step in this approach to the preparation of teach- ing materials (a somewhat later development, of the last ten to fifteen years, and one not practiced by all those who insist upon one or both of the preceding steps) has been the extension of the descriptive structural analysis beyond the mechanical fea- tures of the two languages involved. There has been a vigorous effort to apply with equal systematic rigor, the techniques of a structural approach to a descriptive analysis of the contrastive patterns of the whole social-cultural behavior of the speakers of the two languages.

It is assumed that the ultimate aim of all language learning and teaching is to achieve an understanding as complete as possible between those of differing language backgrounds. Under- standing as here used rests upon a two-way communication. It does not mean agreement, nor does it mean acceptance, or

approval of either the matter or the manner of the communication. It means comprehension and grasp of the full import of the messages communicated. This import lies in the patterns of social-cultural behavior which give significance to the concrete, specific experience of the speakers who use the signals of a language code. The materials for language teaching, therefore, should not ignore, at any stage, the social-cultural content which provides the meanings of the signals.

4. The descriptive structural analysis of the languages involved will reveal much information concerning the significant items of the language signals and the contrastive patterns through which they function. A systematic comparison of two parallel analyses will bring out the strategic contrasts that must be mastered both for production and for reception. Most of those who approach the preparation of teaching materials through such linguistic analyses and comparisons make a sharp distinction between acquiring knowledge about the language to be learned and developing the habits necessary for its practical use. For the preparation of teaching materials aimed at the control of a language for practical use the descriptive analyses and the systematic comparisons constitute essential but only preliminary steps: To be effective, the results of these analyses and comparisons must be embedded in exercises made up of complete utterances carrying on the communication essential to real live social situations. The teaching materials and teaching practice must lead to automatic habits of language production and response rather than to mere knowledge about the language.

In similar fashion the raw results of the comparison of the descriptive analyses of two sets of social-cultural patterns do not constitute a separate body of material to be taught as information. In some way this social-cultural content which gives full meaning to the 'talk' of the people who have used the foreign language all their lives must be vividly realized imaginatively by learners who have had a very different life experience. In some way it must be incorporated in the meanings of all the utterances of the materials to be learned. The language materials themselves must gradually build up in the learner the significant features of a very different way of grasping experience.

### Dictionaries

Concerning the making of dictionaries, especially the making of practical dictionaries for language learners, there has been much vigorous discussion and a variety of suggestions for change, but very few of the published dictionaries have incorporated

really significant innovations. Linguists have contributed to the historical dictionaries and the dialect dictionaries, and have helped the editors of practical dictionaries to improve the soundness of the linguistic information they published. But the makers of two-language dictionaries and of practical dictionaries for foreigners have, on the whole, continued along traditional lines without exploring the possibilities for useful changes built upon the developing new knowledge of linguists.

1. Considerable discussion has centered upon a few problems of the selections of vocabulary entries.

a. Through what specific criteria or general principles of judgment can editors determine the most useful lexical items for inclusion in a practical dictionary? Very few dictionaries can attempt to include the whole vocabulary of the language—there must be a selection. Word frequencies as established by word-counts have many short-comings. The meaning and significance of the various ratings given in a particular word-count can be determined only after an exhaustive study of the details of the processes by which the counts were made. Semantic counts have a validity even more doubtful. Besides, the relation of frequency of occurrence to usefulness in any particular kind of dictionary must be established, not simply taken for granted. On the advanced levels of language mastery the student usually seeks dictionary help concerning the less frequent items, not those of common occurrence.

Nor can one assume a direct correlation between the total number of vocabulary entries and general usefulness. The principles of the selection, in connection with the scale and the nature of the treatment of the included items, offer more significant features for evaluation.

b. In spite of the modern insistence that the materials of speech constitute the 'language,' most practical dictionaries have selected their materials from writing and literature. Only a few of the vocabulary entries carry the label 'colloquial,' and those so marked are often regarded as of a lower level. Frequent discussions have led to a questioning of this approach. Should the basic content vocabulary be that of the language of speech and so assumed without special labels, and the comparatively few items that do not usually occur orally be marked 'literary' or 'bookish'?

c. The vocabulary entries of most practical dictionaries consist only of 'words' (free morphemes). To what extent should such dictionaries include bound morphemes as full vocabulary entries? Would a practical dictionary be more helpful to the learners of a language if it were strictly a morpheme rather

than a 'word' dictionary? Such a dictionary for English would include general explanations not only of such obvious meaning units as -*less* which occurs in such words as *careless, faithless, priceless, hairless, friendless,* and -*ful* in *careful, faithful, mindful, wistful, masterful, mournful, bashful, handful,* but also the multitude of other bound units of which the meanings are much more difficult to grasp and for which at present no easily accessible adequate treatment exists.

d. At the other extreme, the question arises as to how freely combinations of free morphemes should be included as separate vocabulary entries. A car that *runs down* a child is doing something quite different from one that is *running down* a street. A *run down* neighborhood has characteristics that have nothing in common with either of the two situations in which the same two words *run down,* have just been used. English has hundreds of such combinations that form problems which cannot be dismissed with the easy assertion that they belong in a list of idioms. Existing dictionaries give little help to students, and dictionary makers need guidance.

2. Discussion has centered not only upon problems of the selection of vocabulary entries but also upon problems of the treatment of meanings.

a. In a practical dictionary is it possible or even desirable to keep from overlapping the functions of an encyclopedia on the one hand, and, on the other, the functions of a grammar?

For maximum usefulness should a practical dictionary include the encyclopedic information necessary to bring out the social-cultural content of meaning? The social-cultural content covered by any lexical item will, of course, have differing features of significance for each separate linguistic background. For all English speakers *breakfast* is 'the first meal of the day,' but the actual content of the characteristic experience covered by this term differs for those who use it in southern England, in Scotland, and in north-central United States. The American *drug-store* is not the *chemist's shop* of England. The *robin* and the *lark* in the United States are quite different birds from the *robin* and the *lark* in England. How far should a practical dictionary go beyond a strictly linguistic function and incorporate explanations that bring out distinctive features of social-cultural content?

In English, as in many other languages, some words, as special items, signal grammatical meanings. They function as a definite part of the structural signals. How much of these structural uses should dictionaries include? Some 'function words' have both structural uses and lexical content. In English,

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*on, at, in, to, from,* differ in lexical content, but signal the same type of structural connection. The special formula *have* + *to* + 'infinitive' signals a meaning of 'necessity' or 'obligation,' but the word *have* itself, in this situation, has no lexical meaning. Will a practical dictionary be more or less useful if it includes rather full treatment of the grammatical meanings of 'function words'?

b. All dictionaries must deal with the problem of the multiple meanings of words. The clues to the precise meaning out of many which attaches to any particular word in an utterance unit lie, of course, in the so-called 'context.' How far should practical dictionaries go in sharpening the method of using such 'contexts' by indicating precisely the characteristic minimum lexical sets that operate as distinguishing clues for each of the multiple meanings?

c. Considerable diversity of opinion marks the discussions of the kind of 'definitions' most useful for practical two-language dictionaries. Very common in actual use, but most often condemned, is the practice of seeking word 'equivalents' in the two languages and giving one or more of these 'equivalents' as the definition. The difficulties for the learner arising from this method accumulate and increase the more he attempts to use the language productively. The extensions of application he must necessarily make in new situations will inevitably be in accord with the area of meaning of the so-called equivalents in his own language rather than in accord with the area of meaning of the item in the target language.

Definitions by explanation, with a variety of illustrations, in the learner's native language avoid many of the difficulties of the word-equivalent procedure, but they require more time on the part of the student and a dictionary of considerably greater bulk.

Explanations by means of examples of sentences and groups of connected sentences in the target language, giving self-defining context, seem to furnish the most satisfactory learning approach. They require, however, some degree of control of the foreign language by the learner and also a dictionary of considerable size.

What scale of treatment must a practical dictionary have to be linguistically sound and satisfactorily useful?

## Grammars

The basic issue in the discussions concerning the content of practical grammars for foreign language teaching centers in the divergent views concerning the nature of grammar itself.

## PREPARATION OF TEACHING MATERIALS

1. One approach, of long tradition, starts with the meaning of the utterance as a whole; breaks up that meaning into seg—ments of meaning, to which are attached special technical names; and then identifies in any particular utterance the precise words and word groups to which these technical names apply. Defi—nitions are based upon these meanings and stated in terms of meaning. (See, for example, the many definitions of the sen—tence, old and new, that strive to state the 'essence of the sentence,' the common definitions of the 'part of speech,' and the definitions of syntactic relationships.) Grammatical analysis of this kind cannot begin until the total linguistic meaning of the utterance has been established. Learning practical grammar, in this sense, has meant primarily achieving receptive and produc—tive control of these special technical names.

2. Another approach to practical grammar attempts to sum—marize in systematic fashion the details of the forms of words and the arrangements in which they occur in a language. Latin nouns are often grouped in five 'declensions,' with five case forms for the singular and five for the plural. Adjectives are declined in three genders. Verbs are classified in four 'conju—gation' groups. Students learn to decline the nouns and to con—jugate the verbs. They learn the rules that certain prepositions 'take' or 'govern' the ablative case, or the accusative, or the dative. They learn the usual positions in which the various elements of the Latin sentence appear, especially that the verb often comes at the end.

Learning grammar in this sense has meant learning the systematic summaries of the forms, and the rules for their application.

3. A third approach to grammar arises out of the attempt to find all the various kinds of signals a language uses to fulfil its function of mediating meaning. It assumes that the 'words' themselves, the lexical items, which, as units, attach to bundles of experience, signal a definite part of the meaning. It assumes also that another part of the meaning is signalled by contrastive patterns of the form and arrangement. This part of the mean—ing has been called 'structural meaning' as differentiated from lexical meaning. *The hunters killed the wolf* differs from *The hunters killed the bear* in lexical meaning only; *The hunters killed the wolf* differs from *The wolf killed the hunters* in struc—tural meaning only. From this approach, the grammar of a language consists of those devices of contrastive form and ar—rangement (including intonation) which signal this particular layer of meaning called structural meaning. It assumes that these signals are all formal matters that can be described in

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physical terms, and that, as significant signals, these formal matters are always in contrast.

From this point of view, also, a practical grammar would deal only with those contrastive arrangements that function as structural signals. In English, for example, such a grammar would not describe all the possible arrangements of 'word-order' in English sentences, but only those contrastive patterns of form classes that actually function to signal specific *grammatical* meanings. Rhetorical effects of various arrangements would not be included. In Latin or in Old English, word-order has practically no grammatical signalling value. In modern English and in Chinese, it forms a large and important part of the signalling code.

To be of most use in the practical learning of a particular language, such a grammar should describe the structural signals of the target language in comparison with the structural signals of the language of the learner.

# THE ROLE OF LINGUISTICS IN SPEECH AND
# HEARING THERAPY

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In an early paper on the patterning of sounds in a language system, Sapir[1] called attention to the importance of the rela- tions among sounds in a language.   He explained how a person with a lisp might maintain the same relations among the sounds *s*, *sh*, and *th* as a normal speaker of English, and how speech sounds are different from non-speech sounds.  His observation that producing sounds as imitative noises represents an entirely different process from using them as "points in a pattern" can be helpful in understanding the nature and severity of speech defects.   For example, many children can make the "sound" of the *s* as a snake hissing, etc. , more accurately than an adult with a lisp; yet the child may not have the sound incorporated into his language habits as a speech-sound.   One might say that the child was ahead of the adult acoustically, but behind linguistically.   The following discussion will attempt to set forth some of the ways in which linguistics may be used to describe deviant features of the sound patterns (phonology), and gram- matical patterns (morphology and syntax) of persons with defec- tive language habits.

Since linguistic methods are more highly developed for de- scribing sound-systems than grammatical systems, it is probably in the area of phonological analysis that linguistics can be of most help to speech and hearing therapists at present.   An ex- ample of a case of delayed speech in a boy of six may help illustrate the application of linguistic methods in describing his phonology.

The sound-system was characterized by syllable patterning that was restricted to sequences of a consonant followed by a vowel (CV), which means that consonants occurred only at the beginnings of words and that all words were monosyllabic.   The

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[1]E. Sapir, "Sound Patterns in Language," *Readings in Linguistics*, ed. Martin Joos (Washington: American Council of Learned Societies, 1957).

sound elements in his system were the consonants (p, b, t, d, f, h, m, n), the vowels (i, e, æ, ə, u, a, ɔ), and the compound vowels or diphthongs (ej, ij, ow, uw). The preceding vowels and diphthongs have the values ordinarily found in the general American pronunciation of the following words, respectively: p*i*n, p*e*n, p*a*n, p*u*n, c*oo*k, c*o*ck, c*a*lk, b*ai*t, b*ee*t, b*oa*t, and b*oo*t.

Following are some descriptive statements that may be made about the functioning of his sound-system: (1) *k* and *g* occurred in complementary distribution with *t* and *d* before back vowels (this means that *k* and *g* were not independent sound elements, but only conditioned variants of *t* and *d* before back vowels); (2) *ch* in *chump* and *j* in *jump* occurred in free variation with one another and with *t* and *d* in words corresponding to English *Jack* (this means that the word *Jack* might be pronounced with an initial *t, d, ch*, or *j* in any sound context); (3) the sound-system had the contrasting relations of consonant:vowel, oral:nasal, labial:alveolar, stop:fricative, and voiced:voiceless. For excellent discussions of such sound patterning, see Jakobson[2] and Leopold.[3]

It is often helpful to chart the sound elements after the fashion of linguistic scientists, as charting may help reveal more clearly the patterns of relationships among various units of language—sounds, words, phrases, etc. Thus, the sound-system described above may be charted in two ways, each revealing different aspects of the relationships among the sound elements. One chart could be based on the points of articulation and the manner of production:

|  | *Lips* | *Alveolar Ridge* | *Glottis* |
|---|---|---|---|
| *Stops* | p b | t d | |
| *Fricatives* | f | | h |
| *Nasals* | m | n | |

Or, to reveal more clearly the two-way contrast of labial and non-labial sounds in this sound-system, it might be charted as follows:

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[2]Roman Jakobson, *Kindersprache, Asphasie und allgemeine Lautgesetze* (Uppsala: Almqvist and Wiksell, 1941).

[3]Werner Leopold, "Patterning in Children's Language Learning," *Language Learning,* V (1953-54), 1-12.

| Labials | Non-Labials |
|---------|-------------|
| p | t |
| b | d |
| f | h |
| m | n |

With the exception of *h*, of course, the last chart is based upon a labial:alveolar contrast which is worth pointing out if a therapist is to have a fuller understanding of the phonology upon which to base a plan of therapy.

As mentioned earlier, the methods of describing grammatical features are not so well developed at present, and the following discussion is submitted more as a tentative suggestion of an approach to the description of grammar. Generally, the child and the speech-handicapped adult tend to repattern the grammatical system just as they do the sound-system—by reducing the number of features and simplifying more complicated relationships. Thus, the *s*-plural is used for *sheeps* and *goats*, the past tense suffix-*d* for *goed* and *snowed*, the comparative suffix *-er* for *gooder* and *bigger*, and the conventional and the analogical forms may combine to yield *aten* (from *ate* plus *-en* of *eaten*) and *wented*.

Phonetic contexts can often change the forms of words through assimilation in which neighboring sounds make one another more similar, and dissimilation in which they make one another more dissimilar. In the pronunciation of the word *doggy*, for example, the stop consonants may assimilate one another in a forward direction so that it comes out *doddy*, in a backward direction—*goggy*, or the sounds may shift their normal positions in *goddy*. A case of dissimilation occurred recently in our clinic when in the story of *Jack and the Beanstalk*, a child dissimilated a few of the f's in the expression "fee fi fo fum" to "bee wi fo fum." It is interesting to note that, in substituting *b* and *w* for the *f*, the range of dissimilation is limited to the general class of labial or lip consonants of which *f* is also a member.

Other variant forms in the speech of children or older, handicapped persons may result from compounding as in the case of Leopold's[4] daughter who combined "peep-peep" (bird)

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[4]Werner Leopold, *Speech Development of a Bilingual Child* (Evanston, Ill.: Northwestern University, 1939).

and "auto" to form "peep-peep auto" (airplane). In adults with brain injuries, word-shifts often occur in idiomatic phrases: *like* for *as* in "clean like a whistle," *putting* for *turning* in "putting off the light." Blends of two or more words are not uncommon: "frice" (*flour* plus *rice*), "Texico" (*Texas* plus *Mexico*, reinforced probably by gasoline advertising). It is interesting that the brain-injured frequently recognize their errors even when they cannot correct them, and although they may use the wrong word, it will often be a member of the correct form class—noun, verb, etc. A middle-aged aphasic, who was fortunate in having a great deal of language left following a stroke, described the thrusting of a pencil through a piece of paper as follows, "It's in, on, among, amidst—or through."

Following are some suggestions that may be helpful to speech and hearing therapists in applying linguistics to the task of rehabilitating persons with language difficulties.

(1) Lay out the elements of the person's sound-system and grammatical-system, and the way these elements pattern in terms of position in sentences and words, and the characteristic contexts in which they occur.

(2) Distinguish as clearly as possible between forms which are basic elements in the system and those which are variant forms, i. e., "free" or "conditioned."

(3) Repattern habits along the lines that Jakobson has suggested in establishing a minimal system of maximal contrasts. In delayed speech, it helps to follow what he described as "a relative chronology" in deciding the order in which to work on establishing new contrasts such as *b-p* (voiced:voiceless), *p-m* (oral:nasal), or *p-t* (labial:alveolar).

(4) Make a clear distinction in diagnosis and therapy between lexical and grammatical meanings of words, i. e., their dictionary meanings as opposed to their meanings in organized sentences. Scargill[5] has emphasized the need to consider meaning in terms of form, position, and intonation, especially in working with aphasics.

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[5]M. H. Scargill, "Modern Linguistics and Recovery from Aphasia," *Journal of Speech and Hearing Disorders*, XIX (1954), 507-513.

(5) Make use of the approach outlined by Fries[6] in developing basic sentence patterns. Have the handicapped person fill in patterns in utterances such as *There's a* _____ *house,* or *That's an old* _____ , forms in which only members of a single form class can fit—noun, verb, adjective, etc.

(6) Analyze deviant language structure in terms of the ratios of various forms to one another: nouns to verbs, adjectives to verbs, uninflected forms to inflected forms, etc.

In the above discussion, the authors have attempted to show that the application of linguistic methods to speech disorders can be useful in revealing the patterned structure of these disorders. The analysis of deviations in terms of their own peculiar systems of which they are features should provide a more adequate basis for diagnosis and therapy than the current tendency to describe such features as "errors," i. e., deviations regarded from the point of view of the conventional language.

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[6]Charles C. Fries, *The Structure of English* (New York: Harcourt Brace, 1952).

# LEARNING ENGLISH AS A FOREIGN LANGUAGE IN SOVIET TEN YEAR SCHOOLS

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At the present time almost four million Soviet children take English as their foreign language in the ten-year school system (*desiatiletka*), which corresponds to our twelve-year pre-university program in the United States. Thousands start learning English at the age of eight, in the "second class" of elementary school. Since 1956 the Novosibirsk school system has been teaching German on an experimental basis to kindergarten youngsters, and similar experiments have been reported for English. Most Soviet pupils studying English, however, begin it in the "fifth class," which is roughly comparable to the sixth grade in American schools, and they continue with their English for a full six years. Few language teachers in our country will fail to be impressed by the sheer magnitude of the Soviet program.[1] But what do we know of the aims and theories underlying this program, and what are the methods used to put them into effect?

It was my good fortune to visit some secondary-school English classes in Moscow and Leningrad in September, 1958. I was told by the school principals that language teachers are given considerable latitude in their choice of classroom methods. Nevertheless, there appears to be a degree of uniformity in Soviet language instruction which is unmatched in this country. The Minister of Education of any Soviet republic can supposedly tell, on a given day, just what lesson of which book is being

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[1] Its magnitude is particularly impressive when compared with the teaching of Russian in American secondary schools. According to a survey made early in 1958, Russian was being taught in only sixteen high schools throughout the United States. Another survey disclosed that for every American studying Russian, roughly twenty-five hundred Soviet citizens were learning English. The teaching of Russian here is rapidly expanding at the present time.

covered, in any language class throughout the republic.[2]   The
current (1958-1959) program of foreign language instruction is
set forth in such detail as to amount to a sort of linguistic six-
year plan,[3] and teachers are required to follow this plan closely.
Until recently, few if any Soviet language teachers would have
used the methods of a structural linguist, because structural
linguistics was officially denounced as "formalism." One still
looks in vain for the words "phoneme" or "morpheme" in the
descriptive terminology of textbooks or the official program on
language instruction.   I never heard or saw any reference to
such methods as "pattern practice" or the use of "substitution
frames." It is doubtful that a Soviet teacher could get far try-
ing to teach her pupils *American* English; textbook vocabularies
list "lorry" but not "truck," "flat" but not "apartment," and the
phonetic transcriptions indicate an unmistakable British pronun-
ciation ("hockey" = ʧhɔkɪ; "pioneer" = .paɪˈɑnɪə).     A further
measure of uniformity can be seen in the requirement that all
pupils who have studied English in the ten-year schools must
pass an English language examination prepared by the Ministry
of Education before they can go on into higher education.

According to the plan, the overall requirements of the six-
year language course are to contribute in "solving the tasks of
Communist upbringing and education"; to teach pupils to read
and understand authentic foreign-language texts "of medium dif-
ficulty" with the help of a dictionary, and to "lay the bases for
using the spoken language."[4]   I was very interested to observe
some of the ways in which these planned objectives were trans-
formed into actual practice.

The total English vocabulary for the six years is two thou-
sand six hundred words.[5]   Although the compilers of the vocabu-
lary have clearly followed some sort of frequency count in se-
lecting most of these words, they have not overlooked their part
in "solving the tasks of Communist upbringing and education."
Thus, among the first three hundred fifty words (to be learned
in the first year) one finds "America," "negro," and "South,"
along with "Soviet" and "collective farm." Almost all of these

[2]There is no All-Union (federal) Ministry of Education in the
U.S.S.R. and there is considerable variety among the fifteen Soviet
republics which make up the U.S.S.R.   In a conversation with Y. G.
Mamedaliev, President of the Academy of Sciences of the Azerbaijan
S.S.R., I learned that about twenty percent of the secondary-school
pupils there are learning Persian.   The Deputy Minister of Education
of the Uzbek Republic said that many pupils there are learning Chinese.

[3]*Programma srednei shkoly na 1958-59 uchebnyi god. Inostrannye*
(Moscow, 1958), 53 pp.

[4]*Ibid.*, p. 5.

[5]*Ibid.*, p. 30.          58

words—even verbs and prepositions—are also represented by pictures or diagrams when they first appear.

The first thing that a Soviet pupil learns about the English language is that "in English there are forty-four sounds (twenty-four consonants and twenty vowels) which are transcribed by means of twenty-six written letters."[6] Immediately after this, he is informed that the English language has certain peculiar characteristics of its own when compared to Russian:  for example, "English consonant sounds, as contrasted with Russian, are not softened..." Comparisons between English and Russian language phenomena continue throughout the six years of study.

The beginning pupil immediately starts learning the English alphabet, both printed and script.  At the same time he is required to learn the international phonetic transcriptions of the forty-four English sounds, and is given such exercises as the following:

> Find words in the English text containing the following
> sounds:  [æ], [ə], [i:], [ou],

or

> Write English words with the following sounds:
> [tʃ], [k], [s], [z], [ð], [ө].

Pupils are asked to read sets of minimal pairs, some of them presenting great difficulties for the native Russian speaker (pick, pig; bet, bed; fill, feel), or to read a list of English words and explain "in what way the underlined words fail to follow standard rules of English pronunciation: *don't*, dog, *who*, no, *do*, go, so, *what*, *doesn't*, rum, *come*." Pupils study English stress  and intonation (called "melody" in the textbook) from passages marked with special symbols, such as the following, which deals with "Black Jimmy," a little American Negro boy:

/Black and /white ↗children must /not /go to the /same

school in the ↘South.    /Jimmy and his ↗brothers go to

↘Negro school.    /Jimmy has ↑no /white ↘ friends.

/After ↗school he /plays ↗only with ↘black children.

In the ↗South /white /children must /not /play with

↘black children.[7]

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[6]Z. M. Tsvetkova and Ts. G. Shpigel', *English. Uchebnik angliiskogo iazyka dlia V klassa* (Moscow, 1958), p. 3.

[7]*Ibid.*, pp. 123-124.

At the same time, the first-year pupils must learn grammar rules and grammatical terminology. Since there is no article in Russian, the youngsters are early called on to explain the circumstances under which one says "give me *a* map" or "give me *the* map" in English. Their grasp of English syntax is tested by asking them to

Make an English sentence from the following words: stands, the, in, table, the, room, middle, of, the.

They put singular sentences into the plural, or put affirmative sentences into the negative. They rewrite sentences, putting one line under the subject, and two lines under the predicate. They read the sentences "He skates well" and "Their skates are under the bench," then explain how one tells when the word *skates* is a noun and when it is a verb. In every instance they must not only be able to do the exercise, but explain the rules as well.

Some teachers told me that they were dissatisfied with this approach and hoped it would be revised. They felt that it was "too formal," that it burdened their pupils with unnecessary analysis and technical terminology at the expense of practice in spoken English. They pointed out that the large classes (those I visited averaged forty pupils, and I was given to understand that this was the normal, though certainly not the ideal size of language classes) made it very difficult to give each pupil his fair share of speaking practice.

But spoken English is by no means neglected. Teachers employ a variety of aural-oral methods. They require their pupils to do a great deal of reading aloud. They ask them questions in English on the text, or on general topics, and the pupils may reply in English. Pupils must be requested to "give English names to all the objects you can in this room," and are assigned English poems and tourist dialogues for memorization. A favorite device is to "talk about a picture" in English. One picture in the first-year textbook shows a boy and a girl on a sofa. The boy is reading a book. The girl is sitting with hands folded, listening to him. Questions based on this picture include the following:

Is Nick in the street?
Has Nick a book in his hands?
Is Nellie on the sofa?
Has Nellie a kitten in her hands?

In the second-year textbook there is a full-page picture of a schoolboy about to take a snapshot of his younger sister. The

pupils are asked a total of *seventy-four English questions about this picture!*[8]  There are, as we mentioned earlier, no substitution frames, no exercises in pattern practice.  In later years, pupils are asked to retell the story of the text in their own words, or to answer questions which require a statement of ideas pertaining to the text, but involving some vocabulary and constructions not found there:  "What do you learn from this story about the attitude of American magazines to unknown writers?"[9]

All teachers appear to favor mechanical aids for spoken English:  pedagogical movies, records and tapes.  These devices have been discussed in professional journals[10] and are used in the Foreign Languages Institute in Moscow, where many teachers receive a five-year training course in the language and culture of a specific country or area.  But none of the secondary schools which I visited had yet acquired such mechanical aids.

Many teachers in this country disapprove of translation, particularly translation from the mother tongue into the foreign language, in early stages of language training.[11]  In the Soviet Union, however, this method enjoys the official blessing of the Ministries of Education,[12] and both translation from English into Russian and from Russian into English are used extensively from the outset.  In the first years, to be sure, materials for translation are carefully selected so that word meaning and syntax of both languages "overlap" as much as possible.  Typical sentences for translation from the mother tongue into English in the first year are as follows:

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[8]I. A. Nelidova and L. R. Todd, *English. Uchebnik angliiskogo iazyka dlia VI klassa* (Moscow, 1958), pp. 93-95.  (This is the third edition, printed in four hundred thousand copies!)

[9]I. A. Nelidova and L. R. Todd, English. *Uchebnik angliiskogo iazyka dlia 10-ogo klassa* (Moscow, 1958), p. 44  (seventh edition, 200,000 copies).

[10]A number of such articles have appeared in the journal *Inostrannye iazyki v shkole*, which is entirely devoted to problems of foreign language instruction in the schools.

[11]Many American teachers of Russian, for example, feel that it should be taught in controlled group oral practice, with initial emphasis on hearing and speaking.  Later, it should be read, but *without conscious translation*.  Still later, the pupil should be given written exercises, but should write only what he can already *say* correctly.  See "Teaching Russian in American Secondary Schools," *F. L. Bulletin*, No. 59 (June, 1958), pp. 6-7.

[12]See *programma srednei shkoly na 1958-59 uchebnyi god*, pp. 9-10.

This chair stands near the table.
Good pupils read very well.
Put this drum on that chair.

Another type of exercise which some American specialists regard as outmoded, but which is definitely encouraged in the Soviet Union, is dictation.[13]  One teacher I observed spent almost half an hour on dictation, with material selected for its difficulties in puncutation rather than orthography.  Russian-speaking pupils have to unlearn their native habit of preceding the conjunction "that" with a comma, for example, as in the sentence "I knew that Boris was not at home."

Classroom procedure, to judge from what I witnessed, consists of various combinations of the methods discussed above. In a second-year language class which I visited in Moscow, the teacher was already conducting the class in English as far as possible.  She started by asking individual pupils such questions as "Tell me what was your home work?"  "Have you a book?" "What is your friend's name?"  "Has Pete a cap?" and the like. When necessary, she would tell them "Don't hurry," or "That is almost right; try it again slowly."  (She later told me that the children had been on edge because of my visit.)  Next, she had the pupils translate a number of Russian sentences into English, orally and on the blackboard.  Then she went into some detailed grammatical explanations, in Russian.  After this, she had the entire class play a game of questions and answers in English: a girl pupil named Chekova asked the question "Where is your pen?" and called on a fellow-pupil named Oleshin to answer. Oleshin stood up and said, "My pen is on the desk."  Oleshin then turned to a pupil named Matveev and asked, "Have you a dress?"  Matveev, being a boy, emphatically denied the posession of a dress, to the general amusement of his classmates. Matveev then asked a girl named Prichishkina whether she had a dog.  Prichishkina merely giggled.  The teacher admonished her in English: "Don't laugh.  Answer the question."  And so it went.  Then the pupils were asked, individually, to read a few lines in English from the textbook.  The teacher, who spoke English with a very respectable British accent, kept close track of their pronunciation.  The lesson closed with a five-minute explanation (in Russian) on the vagaries of the English plural.

Soviet pedagogy distinguishes between two types of reading:

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[13]*Ibid.*, p. 11.

"synthetic" and "analytical. "[14]   Texts used for "synthetic" reading contain no unfamiliar words or grammatical constructions, while "analytical" reading introduces new words and constructions.   "Synthetic" reading is practiced in class and as home work at all levels, whereas "analytical" reading is done only in class at first; in the later years of study, the pupil does more and more of it on his own.

In each of the first two years of English study (the "fifth" and "sixth" classes) there are one hundred and thirty-two contact hours.   After that, there are ninety-nine English language contact hours per year.   Phonetics, orthography and "rules of reading"[15] receive their greatest attention in the first two years, but are systematically reviewed and developed at the higher level.

As their study of English progresses, the pupils discover that several methods exist for translating English phrases into Russian:   literal, descriptive and analogous.   They are introduced to the complexities of English tenses, for example, the present perfect, the past indefinite and the past perfect, and must select the correct tense of the verbs "to be" or "to read" in such sentences as these:

I _____ to Moscow.  I _____ there in 1957.
_____ you _____ "Kashtanka" by A. Chekhov ?
Yes, I _____ .   When _____ you _____
it?  I _____ it last year.

They are confronted with the problem of multiple meaning, and, while there are generally fewer visual aids in the advanced textbooks, clever sketches illustrate the difference between the verbs "to say, " "to tell, " "to speak" and "to talk"—all of which may be expressed in the present tense by a single Russian verb. Pupils turn direct discourse passages into indirect discourse. They analyze single words, indicating whether they are simple, derivative or compound.   In the last year of study they take up questions of lexicology and style:   when is it preferable to say

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[14] *Ibid.*, p. 9.   For an example of "synthetic" reading, see the text in N. A. Egunova, E. G. Prokhorova, M. Ia. Rybkina, *English. Uchebnik angliiskogo iazyka dlia VIII klassa* (Moscow, 1958) p.  16, which is an adapted version of Dickens' "Our Mutual Friend".

[15]"Rules of reading" explain English pronunciation in considerable detail.   For example, "The combination of letters *oo* before *k* is pronounced by the simple short vowel [u], for example: bo*ok*.   Before other consonants *oo* is generally pronounced by the simple long vowel [u:], for example: sch*oo*l. " Tsvetkova and Shpigel', *op. cit.*, p.  57.

"descend" and when "sit down"? When does one "commence" and when does one "begin"? What are metaphors, epithets, ellipses, metonymy and personification?

As the pupils advance, they do more and more reading. The textbooks at the higher level use English almost exclusively, even in the directions for exercises.[16] Russian words appear only when necessary to explain idiomatic passages and vocabulary, or in translation exercises. The majority of reading selections are from English authors (Dickens, Scott, Wilde, Shakespeare, Thackeray, Jonson), but a few Americans (Twain, London, Dreiser) are represented. In the earlier years, these materials consist of adventure stories or factual essays, but when the pupils are in their teens the selections lean more toward social criticism and romance.

The final examinations in English language, taken by pupils at the end of their ten-year school program, consist of two parts. The first part involves reading and translating an unfamiliar English text, with dictionary. The second part is grammatical, and the pupils are required to answer such questions as the following:

> Find in the text derived adjectives and indicate the suffixes in them. Determine the degrees of comparison of adjectives contained in the text and describe methods of forming them.

> Find in the text the modal verbs. State their morphological peculiarities.

> Find in the text a *Gerund*. Define the syntactical function of the *Gerund* in the text read. Show ways of translating into Russian.[17]

It would be presumptuous on my part to attempt an evaluation of the positive features of English teaching in Soviet ten-year schools. I could not help being impressed—very favorably impressed—when one Vladimir Minin, aged 13, came up to me

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[16]Beginning in the ninth class, a separate grammar (I. A. Gruzinskaia and E. B. Cherkasskaia, *English Grammar)* is used in conjunction with the textbook, which is E. B. Belova and L. R. Todd, *English. Uchebnik angliiskogo iazyka dlia 9-go klassa* (Moscow, 1956), 163 pp.

[17]See "Final Examinations in the Russian Ten-Year School, " *Information on Education Around the World* (U.S. Department of Health, Education, and Welfare) No. 6 (October, 1958), pp. 20-22 for sample examination questions in English.

in the Leningrad post office and spoke with me in English for ten minutes. Vladimir admitted that he had recognized me as an American from my dress, and he wanted to know whether I had any American friends who might be interested in trading postage stamps with him. His English was good. When I complimented him on it, he said that he had been studying it "for several years" at his school.

But Soviet educators and administrators exhibit little satisfaction or complacency about the program of English instruction in the ten-year schools. On the contrary, there are reasons to believe that the whole system is about to be overhauled. I have already mentioned the criticisms I heard from individual teachers about excessive "formality" and oversized classes. An instructor at the Moscow Foreign Languages Institute declared to me that students specializing in English there have to "start from scratch," although they have studied the language for six years in secondary school! Some teachers have carried their case to the press. What gives some of their complaints a certain significance is the fact that they appeared shortly before the announcement of plans to reform the entire Soviet educational system. A persistent theme in the reform discussions has been that the present educational program is impractical and "divorced from life," that its graduates are unprepared to take part in "socially-useful activity."[18] According to one very interesting report, foreign language teaching is no exception: when they met young people from foreign lands at the Communist-sponsored World Youth Festival (held in Moscow in the summer of 1957), Soviet students who had studied English for six years or more found themselves unable to keep up a simple English conversation with their guests! "Everybody admits that our system of teaching foreign languages is unsuitable and does not justify itself," says the author of the report, himself a language teacher. "Yet no practical steps for modifying this system are in evidence... The difficulty is that the study of foreign languages here amounts simply to the cramming of individual

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[18]See N. Khrushchev's proposals "On Strengthening the Ties of the Schools with Life and on Further Developing the Country's Public Education System," in *Pravda*, Sept. 20, 1958, p. 1, and the Resolution of the Plenary Session of the Communist Party Central Committee, adopted November 12, 1958, in *Pravda*, Nov. 14, 1958, p. 1. The latter refers in its eighteenth section to the fact that "the study of foreign languages must be radically improved in schools all over the country".

words and rules of grammar, with almost no practice in conversation... The Soviet Union's international ties are broadening, and our lag in the study of foreign languages is becoming intolerable. "[19]

I must confess that such attacks perplex me. Unless the schools which I was permitted to visit are on a much higher level than most in the Soviet Union, and therefore not genuinely representative of the quality of English language instruction there, my opinion would be that the Soviet system, whatever its defects, can hardly be said to "lag." Apparently some struggle is going on between various schools of theory and methodology, and we may witness some important changes of the system in the near future.

[19]*Komsomol'skaia pravda*, May 14, 1958, p. 3. The English translation of this revealing article (called "Improvement Urged in Language Teaching Methods") appears in *The Current Digest of the Soviet Press*, Vol. X, No. 28 (August 20, 1958), pp. 4-5.

# THE ENGLISH PHONEMES /š/ AND /č/: A HEARING AND PRONUNCIATION PROBLEM FOR SPEAKERS OF SPANISH LEARNING ENGLISH

John B. Dalbor
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1.   One of the most difficult phonetic problems encountered by a speaker of Spanish who is studying English is how to learn to hear the distinction between and produce the English phonemes /š/ and /č/.   Apart from the purely phonetic aspect the matter is further complicated by the fact that English has an abundance of /š/ and /č/ minimal pairs which can cause extremely humorous—or embarrassing—situations when confused.   (For example, "While shaving, John cut his *shin* ." The reader can think of many more.)

Difficulty in hearing and producing these two English phonemes is very common among speakers of Spanish for two principal reasons.   First, in no dialect of modern Spanish, to this writer's knowledge, does [š] exist as a phoneme, and in many dialects it does not even exist as a phone.   This can be seen in foreign words containing [š] which are Hispanicized.   For example, French *champagne* [šãpáṇ] becomes *champaña* [čampáṇa],   or English *shawl* [šɔl] becomes *chal* [čal].   Secondly, it is likely that in some Latin-American countries [š] is being used today in free variation or possibly complementary distribution with [č].   For example, in Panama *leche* can be heard as either [léče] or [léše].

This latter hypothesis is suggested by the fact that, while most Spanish-Americans claim that [š] is not "correct" in their dialect, they admit that it causes no difficulty in meaning when heard in place of [č].   And, when tested, many of them show a complete inability to distinguish between these two sounds in Spanish words as well as English words.   In addition to this, it seems reasonable to assume that the affricate [č] may someday pass entirely over to the fricative [š], thereby suffering the same fate as the two medieval Spanish affricates [ts] and [dz], which evolved into the modern fricatives [θ] in northern and central Spain and [s] in southern Spain.

In most dialects of modern Spanish [č] is a voiceless palatal affricate.[1]   The English [č] is articulated in almost the

same fashion, so that for all practical purposes the two [č] sounds are identical or at least close enough for a speaker of either language to substitute the sound from his own language in words of the foreign language without a notable difference being observed by his listeners.

The English [š] is a voiceless palatal fricative. Technically the sound is almost the same as the final fricative part of the Spanish [č]

2. In an effort to analyze and solve this particular pronunciation problem in English an investigation was conducted with a Spanish-speaking informant, who at the time (August 1957) was pursuing an intensive course in English. He was about 20 years old, a high school graduate, and a native and resident of Havana. Tests given to him in the course showed that his knowledge of English was quite rudimentary.

His particular dialect of Spanish is what might loosely be termed "Caribbean." It is spoken, for the most part, by people from Cuba, Puerto Rico, the Dominican Republic, some of the Central American countries, northern Venezuela, and the northern coastal regions of Colombia. This variety of Spanish, as most non-Castilian dialects, differs from Castilian Spanish principally in two phonemes. The Castilian /Θ/ is pronounced as a dorsal [s], and the Castilian palatal /ʎ/ is pronounced in a variety of ways, including [y, ĵ, ž], and even complete absence of sound. Some of the phonetic features which distinguish the "Caribbean" dialect from those of much of the rest of the Spanish-speaking world are the velar [ŋ] in place of final [n] and the aspirated [h] or absence of sound in place of final and pre-consonantal [s]. As one might expect, there are a goodly number of lexical variations, but the grammatical differences are so few and slight that they are for all practical purposes negligible. The informant's variety of Spanish, then, despite any sound or vocabulary differences, is easily understood all through the Spanish-speaking world, and he was deemed to be a typical representative of non-Castilian Spanish.

The informant, as most speakers of Spanish do, insisted that [š] did not exist in his own dialect, but that he never had any trouble in understanding Spanish words in which it was used instead of [č]. Several common Spanish words like *muchacho, chico, leche,* etc., were pronounced with [š] instead of [č]. At first he experienced the same difficulty in hearing this sound in

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[1]Tomás Navarro Tomás, *Manual de pronunciación española,* 5a ed. (New York: Hafner, 1957), pp. 125-127.

Spanish words as he did in English words. But after it was made clear to him that [š] was being used, he replied that he understood the words perfectly, but that "people in Havana just don't say them that way." When he was asked if such pronunciation was correct, he seemed doubtful and did not express a definite opinion one way or the other. Again, his doubtful replies led one to suspect that [š] was beginning to be used in limited positions as a substitute for [č] in the speech of some of the people of his linguistic area.

The informant, then — possibly due to the fact that [š] is completely absent in his dialect of Spanish—but more probably due to the fact that it exists in free variation with [č] in some situations, could not hear the difference between [š] and [č] in English words, either in the stream of speech, in minimal pairs, or in complete isolation.

This observation illustrates the obvious, but often ignored, fact that his problem, like most problems encountered in mastering the sound system of a new language, was two-fold. Many teachers concentrate exclusively on an effort to get their students to pronounce new sounds satisfactorily and rapidly. Unfortunately they ignore the first and equally essential part of the problem — the fact that in order to produce a new sound satisfactorily, one must first be able to hear the sound correctly and distinguish it from other similar ones in his own language. Thus, the speaker of Spanish is not likely to master the pronunciation of English /š/ unless he first can be made to *hear* the difference between this sound and its counterpart /č/.

3. Ideal materials for the teaching of this problem must observe and make use of a linguistic truism, which unfortunately is too often ignored by language teachers. It is now a well known, but little utilized, fact that most people learning a new language will at first transfer the sound features, the lexical meanings, and the grammatical patterns of their own language to the new language. Thus, certain specific problems can be unerringly predicted if the native language and the new language are scientifically compared beforehand. Materials based on this comparison can then be prepared.[2]

[2]Excellent materials and methods for the teaching of this problem (and others like it) can be found in the book *English Pronunciation* by The Research Staff of the English Language Institute (University of Michigan: English Language Institute, 1958), prepared as one of the four volumes used in the eight-week intensive course at the English Language Institute of the University of Michigan. These materials were originally developed specifically for the many Latin-American students who come to the Institute.

The following description presents the steps taken in an effort to overcome the student's problem. First, a test was administered (to be explained below) to measure the informant's difficulty with this sound problem. After the test the phonemic values of /š/ and /č/ were explained in non-technical terms. It was pointed out how important they were in many words and how humorous or even ludicrous a confusion between these two sounds could be. This helped to make the informant fully aware of the importance of the problem and the possible consequences of an error made in the production of these sounds.

Then the informant proceeded to practice the pronunciation of the sounds. He made many errors, but was now obviously making an extreme effort to produce them correctly. At this point he was in a good psychological state of readiness for a different type of explanation.

It was felt that sketched facial diagrams would not be very valuable in the particular instance because the affricate [č] involves two basic positions of the articulatory organs, and two separate diagrams might prove confusing. So the position of the tongue was described as accurately, yet as non-technically as possible, in Spanish to insure complete comprehension. Then the student imitated a slow and emphatic pronunciation of both these sounds. He was corrected several times, being reminded of where the tongue should be, how the lips should be placed, etc.

When it was felt that he was achieving a satisfactory production of both sounds in isolation, the student was asked to repeat a series of [š] words, concentrating at the same time on producing the sound as accurately as possible. Then the drill was repeated with the [č] sound. He continued to make errors, but not only were they fewer, but he began catching them himself before he was corrected. A more rapid drill with minimal pairs, such as *shoe, chew; ship, chip;* etc., followed this.

An identification exercise was used next. The number 1 was assigned to the [š] sound and the number 2 to the [č] sound. Using a group of common minimal pairs, individual words were pronounced at random. The student identified each word by giving the corresponding number. This was continued until his perception of the sounds improved to the point where he made an average of one error in every six or seven words.

Then a production drill with individual words and minimal pairs was used again. A few examples were illustrated more graphically. For example, he was asked to pronounce the correct word as the chin and then the shin were indicated. Draw-

ings of a ship and a chip were shown to him. These exercises were designed to distract his attention from the sounds themselves momentarily and to see if he could continue to produce them correctly while framing a mental concept for a brief period of time, instead of depending on sheer imitation or sound identification.

Finally, the informant's ability to perceive and produce these sounds in the stream of speech, rather than in isolation or minimal pairs, was tested. Longer sentences containing a word with [š] or [č] were pronounced, and he repeated them. Some sentences contained both sounds, as for example, "Which shoes did you choose?", "There's a chip on the ship", etc.

These various drills were repeated, interspersed with more theoretical explanations and demonstrations of the articulatory positions. The informant was advised to practice these sounds in every way possible the rest of the day.

The following day most of the explanations, demonstrations, and drills from the previous day were repeated for another hour. Following this another test was given, and the results were evaluated.

4. The examinations were designed to test two broad areas: perception and production of the sounds. The first section of the perception part was composed of ten groups of three short sentences, in which one word had either /š/ or /č/. The informant was instructed to write on his answer sheet the numbers that corresponded to the sentences which were exactly the same. For example, for No. 1, "She's watching the baby. She's watching the baby. She's washing the baby," the informant was supposed to write on his answer sheet the numbers 1 and 2. The sentences were pronounced at a normal rate of speed, with identical intonation and rhythm, and with only a slight pause between.

In the second section of the perception part the student was instructed that the number 1 would correspond to the sound [š] and that the number 2 would correspond to the sound [č]. Ten sentences ("Bring that latch here." "I didn't want much," etc.) were pronounced at a natural rate of speed, with normal pauses, and he was asked to write the number that corresponded to the [š] or [č] word in the sentence.

The first section of the production part involved both hearing and production. The informant was told that ten [š] and [č] words would be read. After each word he was to pronounce the "same" word but with the opposite sound. For example, after *lash*, he was to say *latch*.

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In the second section of the production part ten complete sentences, each one containing one or more [š] or [č] words, were pronounced, and the informant repeated the entire sentence. Several of the sentences contained contrasting words. For example, numbers 6 and 7 were "Which wish did you make?" In this section, rather than depend solely on sheer imitation or contrast, the informant could use meaning as an aid in his production of the sounds.

The results of the first examination were as follows: Section I—ten items, nine errors; Section II—ten items, four errors; Section III—ten items, six errors; Section IV—15 items, ten errors. TOTAL—45 items, 29 errors, or only 35.6 per cent correct.

After the second hour of teaching another examination was administered to the informant. It was in reality composed of the same material as the first examination but rearranged so as to prevent him from remembering or recognizing the same questions.

The results of the second examination were as follows: Section I—ten items, seven errors; Section II—ten items, one error; Section III—ten items, five errors; Section IV—15 items, four errors. TOTAL—45 items, 17 errors, or 62.2 per cent correct.

Thus, the informant improved by two errors in Section I; by three errors in Section II; by one error in Section III; by six errors in Section IV; and by 12 errors in the entire examination. He made 58.6 per cent as many errors the second time, or, roughly speaking, he cut his error total almost in half.


5. These brief, but concentrated, sessions seemed to indicate that it was entirely possible for this particular pronunciation error to be corrected. With more such sessions the error might be eliminated entirely.

In the case of this informant and most Spanish-speaking people the confusion between [š] and [č] stems from a deeply-ingrained linguistic habit, as do most errors in the perception and pronunciation of the sounds of a new language. Yet any of these extremely difficult problems can be solved if recognized and met squarely by both teacher and student. One of the best ways to handle these linguistic stumbling-blocks is to predict them beforehand by means of a scientific comparison of the sound systems of the native language and the new language. Thus the most serious difficulties are isolated, given special

attention, and prepared for easier learning by the student. And to solve only a carefully-chosen and deliberately-limited number of such pronunciation problems is to make a great advance toward a complete mastery of the sound system of English.

# REVIEWS

Leonard Bloomfield, *Eastern Ojibwa: Grammatical Sketch, Texts and Word List.* Ann Arbor: The University of Michigan Press, 1957.

This important work of Bloomfield's, in the hands of the publisher at the time of the author's death in 1949, and now appearing following editorial revision by Charles F. Hockett, is of a kind not usually reviewed in these pages. It is a rather special work, somewhat outside the expressed scope of this journal and thus not intended immediately to appeal to those of us primarily or exclusively interested in applied linguistics. Nevertheless this invaluable book can be, and indeed herewith is, strongly recommended even to those of us whose interest in and contacts with general linguistic theory is only peripheral, whose primary concern is, in short, with the *results* of linguistic science as applied to the teaching of language rather than with its aims and methods.

Bloomfield's contributions to American Indian linguistics as well as to American Indian studies generally need not be discussed here; these are acknowledged by the specialist, and the author's place in this field is assured. Nor is this the place to detail and further dwell upon the enormous debt that all of us, linguistic generalist and specialist alike, owe to Leonard Bloomfield. Most of us have cut our linguistic teeth on *Language*, and though many valuable contributions have been made since 1933 — most of them generically Bloomfieldian — Bloomfield's great work remains the linguist's Bible, and if not his whole Bible, certainly his Old Testament. More specifically, his *Outline Guide for the Practical Study of a Foreign Language\** is still a concise, refreshing and, as the title correctly indicates, practical treatment of the subject.

The reviewer's purpose then in strongly recommending *Eastern Ojibwa* to the readers of LANGUAGE LEARNING is to encourage and to strengthen a measure of inter-disciplinary cross-pollenization and understanding. This book is of interest to the non-linguist language teacher as an excellent example of the descriptivist's art. This is the kind of work that should

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*Linguistic Society of America, Baltimore, 1942, p. 16.

ideally—but, alas, in practice not often enough does—form the principal foundation of successful language teaching materials. It is an example of the kind of descriptive excellence that the language teacher should recognize and ultimately come to expect in the language descriptions on which he ultimately bases realistic and successful language teaching materials. Few readers of this journal would deny the proposition that the ultimate success of a language training course is in direct proportion to the excellence of the descriptions of the languages involved in the training situation. But from this to the understanding and recognition of the requisite excellence is a long important step. The reviewer can recommend no better yardstick, no more illuminating basis for comparison, than the work here under consideration.

The book is divided into four parts: Grammatical Sketch (I); Sentences—a total of 888 (II); Texts—38 in all, some representing two or three versions of a single story (III), and a Word list, in the order of the Roman alphabet (IV). The Grammatical Sketch proceeds according to the scheme we have come to accept as the "normal" one, i.e., phonology: ch. 1 (entitled simply 'Sounds'); morphology: chs. 2-19 (incl. Internal Sandhi, 3; Morphologic Processes, 4; Inflection, 5-9; Composition, 10; Word Formation, 11-19; and Syntax; ch. 20. An author's preface, and a Foreword by Charles F. Hockett, both brief and to the point, complete this excellent work.

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University of Michigan

# REVIEWS

W. Nelson Francis, *The Structure of American English*. New York: The Ronald Press, 1958.

As Francis tells us in his preface, *The Structure of American English* is intended for an introductory one-semester course in the structure of American English. It will be a busy semester. This is a big book (614 pp.), and a solid one.

Francis has a long opening chapter, "Language, Languages, and Linguistic Science," which provides the orientation; and a closing chapter, "Linguistics and the English Teacher," which provides some applications and advice. Raven McDavid contributes a graceful and very thorough discussion of the dialects of American English.

In between, Francis deals at length with articulatory phonetics, phonemics, morphemics, grammar, and graphics. Broadly speaking, he uses the Trager Smith (1951) phonology and the Fries (1952) syntax. But he sometimes blends his authorities or even goes his own way. For instance he retains the traditional terms for the parts of speech, and much of his discussion of formal distinctions exhibited by English verbs comes from Smith-Trager. He also puts to work the scholarship which has somewhat refined both phonology and syntax in the last eight years. There is much independent material in the chapter on graphics.

Francis is aware of his supposed audience—an upper-division student. The text bears a heavy freight of examples, and sections and chapters wind up with summaries. Each chapter has a collateral reading list, and there is a general bibliography at the end. He has been treated handsomely by his publishers, who have allowed him lots of charts for everything, and typographical boxes to help in the description of syntactic structures.

The treatment is thorough. Except for one thing, *The Structure of English* should be a very useful text. A writer of a text in linguistics can provide a series of rigorous exercises within his book (Pike); he can provide a workbook (Gleason); or he can refer to someone else's workbook (Hockett to Gleason's). But he ought to do something. The run-of-the-mill instructor in a course in the structure of American English is probably not yet really a linguist, and the student certainly isn't. They both need help. Even the right kind of grammar book—and this one is the right kind—needs exercises.

Graham C. Wilson
San Jose State College

Ernst Koch and Francis J. Nock, *Essentials of German*.   New
   York:  Oxford University Press, 1957.
A. F. Cunningham, *Science Student's Guide to the German Lan-
   guage*.  London:  Oxford University Press, 1958.

*Essentials of German* is a recent contribution to the large
number of texts now available for elementary instruction in
German.   Like most of them, it is competently written and well
organized along the usual, traditional-textbook lines.   The gram-
matical explanations are succinct and unambiguous, and the vo-
cabulary has been selected with an eye to frequency of occur-
rence in contemporary German (according to the Morgan-
Wadepuhl AATG *Minimum Standard German Vocabulary*).   The
two authors have seen to it that the *Gespräche* and the *Lesestücke*
are faithful samples of standard German as it is spoken and
written in Germany today.   As we have come to expect of Ox-
ford University Press publications, the layout and printing are
excellent.

The major weakness of this book is that it contains no sig-
nificant innovations in content or arrangement, although many
such innovations are possible.   Recent studies of the German
verb, for example, give valuable clues for more efficient ways
of teaching this major stumbling block of many beginning students.
There is already a plethora of beginning texts which present ap-
proximately the same information in essentially the same way;
there seems to be little justification, other than commercial,
for adding this book to the long list of those currently in use
(for further discussion of this question see the review of *The
New Fundamental French* by Micks and Longi, Oxford University
Press, New York, 1953 in *Language Learning*, V, 1955, 157-
159).

Much of modern linguistic research, in this instance that
having to do with German in particular, has implications of
importance for textbook preparation and classroom teaching.[1]

[1]Some of the pertinent studies are: Basilius, Harold A., "A Struc-
turalist View of German Syntax," *Modern Language Journal*,  36, 1953,
130-133; Bornemann, Richard, "Die ebene Betonung im Englischen und
im Deutschen," *Die neueren Sprachen*,  3, 1954, 200-205; Brown, Faith
S. ,  *Intonation in German Interrogative Sentences*,  Northwestern Uni-
versity Summaries of Doctoral Dissertations, 18, 1950, 42-46; Halle,

For some reason (or perhaps a combination of reasons) many authors of elementary texts seem generally hesitant or unwilling to make the revisions in content and arrangement suggested by recent linguistic research (one factor is doubtlessly the reluctance of publishers to permit changes to be made which, they fear, might lessen the acceptability of their texts to traditionally-minded teachers). An elementary text is, of course, no place to introduce sophisticated and complex linguistic data of interest only to specialists, but it *is* a place where the findings of linguistic scholars can be combined with the practical knowhow of many fine and experienced teachers to produce even more effective language-teaching materials. Certainly no miracles will be performed by the utilization of new linguistic insights in textbook writing and language teaching, but the job of imparting and acquiring a linguistic skill *can* be made more rewarding and less frustrating for teachers and students.

The complete absence of any mention, however brief, of the intonation of German is a surprising omission in a book intended (according to the authors' Foreword) for use in an oral-aural approach to the learning of German. We know quite a great deal about the basic patterns of intonation in modern spoken German, and it would surely be desirable to acquaint the beginning student with at least the rudimentary facts of German intonation. If the beginning student were told no more than that German intonation differs quite markedly from that of English in certain respects, and that he should try to identify and reproduce at least the grosser features of German intonation patterns, even that would be preferable to just avoiding the matter entirely.

Morris, "The German Conjugation," *Word*, 9, 1953, 45-53; Heffner, R.-M. S., "Phonemics in Elementary German?," *Monatshefte für deutschen Unterricht*, 46, 1954, 273-277; Koekoek, Byron J., "German Vowel Length and the Student of American-English Background," *Monatshefte für deutschen Unterricht*, 46, 1954, 267-272; Kuhlmann, Walter, "Vergleich deutscher und englischer Tonhöhebewegung," *Zeitschrift für Phonetik und allgemeine Sprachwissenschaft*, 6, 1952, 195-207; Marchand, James W., "The Use of Prediction in Teaching the German Verb," *Language Learning*, 5, 1955, 138-143; Marchand, James W., "The Teaching of German Word Order - A Linguistic Approach," *Language Learning*, 8, 1958, 27-35; Moulton, William, "Juncture in Modern Standard German," *Language*, 23, 1947, 212-226; Mueller, Hugo, "Stress Phonemes in German," *Studies in Linguistics*, 8, 1950, 82ff.; Mueller, Hugo, "Some German Intonation Patterns and their Relation to Street," *Modern Language Journal*, 40, 1956, 28-30; Ulvestad, Bjarne Ellingson, "The Strong Verb Conjugation System in German," *Word*, 12, 1956, 91-105.

The exercises are quite ample, although some teachers may feel that certain devices are overworked (particularly English-to-German translation). How often, by the way, will the American student of German have occasion to say such things as on p. 103, "The Eskimos have no classic writers, for they are not a highly civilized people"? I would like to see more exercises of the substitution-frame type (*Ich sehe das Kind, Ich sehe die Katze, Ich sehe das Buch, Ich sehe den Mann, Ich sehe die Männer,*etc. , to give a very simple example). This type of drill has the great advantage of specifically focusing the attention of the student on the particular point to be practiced, and avoids preoccupation with other, momentarily irrelevant, points.

A commendable feature of this book is its complete separation of the *Gespräche* and the *Lesestücke,* which serves to emphasize the fact that in German, as in English and numerous other languages, conversational style may and often does differ noticeably from expository style. This is an important linguistic fact that not all textbooks bring clearly to the student's attention.

All in all, then, this is not a bad book, but one which in my opinion could be made much better. Of the authors' overall competency there is certainly no question.

*Science Students' Guide to the German Language* is, as its title indicates, intended to fulfil a rather specific purpose. By and large, it will no doubt serve well the students for whom it is intended. It is in a sense two books, one a highly condensed presentation of the basic grammar of German, and the other a collection of readings on technical subjects. It contains neither footnotes nor vocabulary since, in the view of the author "Experience of the former [footnotes] has taught me that they are mainly used by the student as a substitute for thought, while the latter [vocabulary] merely postpones his learning to handle a dictionary effectively" (Foreword, p. v). Miss Cunningham's book, the jacket tells us, ".....presents her own teaching method evolved by long practice.....", but we are nowhere told explicitly of what the method consists.

As already mentioned, the précis of grammar presented in the first 96 pages of the book is extremely condensed, so much so that in places it looks more like a reference grammar than one intended for classroom use by students. The bare bones of the grammatical skeleton will have to be provided with more flesh by the teacher using the book if the student is not to find them unpalatable. An excellent feature of the grammar section, however, is its frequent use of selections from current German

scientific and technical publications to illustrate the various grammatical points under discussion.

The "Hints on the Use of the Dictionary" (pp. 97-99) contain some useful information regarding certain of the conventions of German dictionary arrangement which differ from usual American practice, and pointers which help the student to avoid other minor difficulties which might lessen his most efficient use of German dictionaries.

The "Readings" (pp. 100-184) are well-chosen, and include selections having to do with chemistry, geography, geology, mathematics, engineering, bacteriology, and physics. The passages chosen are varied and up-to-date, and it would be difficult to improve much upon them.

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Gaylord Todd
University of Michigan

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## NOTES AND ANNOUNCEMENTS

The editors have received the following letter from George L. Trager, Professor of Anthropology and Linguistics at the University of Buffalo, and are quoting it in full.

I hope that you will let me address a somewhat serious—but not too much so—protest about an editorial matter in the special issue of LANGUAGE LEARNING dealing with last year's conference. And I hope that you will find room in a subsequent issue to publish the gist of my remarks with any comments you may choose to make.

On page 76, I am quoted as having said "As an historical note, ...". Now, if your style book calls for the use of "an" before "historical", you will obviously edit texts of papers according to the style book, but this is not a paper. It is a report of spoken comments. I have never spoken the word *an* before an item beginning with a pronounced *H*, nor have I ever written it. I would object to an editor's changing *a* to *an* before *historical* even in a "literary" production of mine and I object very much more to such editing of spoken remarks. This is not to say anything about my opinion of such an artificial style rule for a linguistic journal.

Prof. Trager is referring to the Special Issue (June, 1958) of *Language Learning* which is a report of a conference on *Linguistics and the Teaching of English as a Foreign Language*. The word in question appears in a remark by Prof. Trager following a paper delivered by Harold V. King. We wish to say that it was a matter of the style book and wish to apologize for the imposition. We hasten to ask the indulgence of all others for any shortcomings that may have arisen in the difficult task of transcribing their remarks made from the floor.

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THE MICHIGAN LINGUISTIC SOCIETY held its 1958 Fall Meeting, November 22, at the Kresge Science Auditorium at Wayne University in Detroit. Victor A. Rapport, Dean of the College of Liberal Arts at Wayne, presided over the following program:

| English Teacher Training Seminars in Japan | William E. Norris University of Michigan |
| "We Was Wondering What Them Were" (Another Pot-Pourri of Popular Michigan Speech) | O. L. Abbott Michigan State University |
| Language as Particle, Wave, and Field | Kenneth L. Pike University of Michigan |
| Oral Grammar Drills | Harold V. King University of Michigan |

Approximately one hundred persons attended.

The Spring Meeting is scheduled for May 9, 1959, at Eastern Michigan College, Ypsilanti, Michigan.

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The Linguistics Club of Puerto Rico was organized at the University of Puerto Rico on April 4, 1958. Purposes are (1) to provide an opportunity for persons interested in linguistics or related disciplines to meet and discuss these interests, (2) to stimulate an interest in linguistics among those dealing with applied aspects, and (3) to make the principles, methods, and findings of modern linguistic science more widely known.

Papers are read and discussion is held in either English or Spanish. There are to be a minimum of two meetings per semester. Members come from all over the island and membership is open to all persons interested enough in the activities to pay the dues of $4.00 a year. Officers elected for this year were Morgan E. Jones, chairman, Eugene V. Mohr, recording secretary, and Joseph Kavetski, corresponding secretary and treasurer. (Dr. Kavetski was subsequently called to Mexico on a Smith-Mundt and was replaced by Charles Strong.)

At the meeting on May 23 Dr. Hans Wolff delivered a paper entitled "Intelligibility, Communication, and Inter-Ethnic Attitudes" and on October 3 Morgan E. Jones read a paper entitled "Puerto Rican English: A Study in Bilingual Behavior."

Those attending the founders meeting on April 4 were Dr. and Mrs. Angel M. Mergal, Herman C. Hudson, Eugene V. Mohr, Dr. and Mrs. Hans Wolff, Morgan E. Jones, Dr. Joseph

Kavetski, Dr. Ruben Del Rosario, Dr. B. J. Wallace Robinett and Ralph Robinett, Adrian Hull, and George Witt.

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The Canadian Linguistic Association and the University of Alberta are again sponsoring a SUMMER SCHOOL OF LINGUISTICS. It will be held at the University of Alberta from July 6th to August 14th. Courses to be offered are: Comparative Classical Philology, Teaching English as a Second Language, History of the English Language, Modern English Grammar, Linguistic Geography and Lexicography, Semantics and Translation Theory and Practice, General Linguistics, Phonetics and Phonemics, Morphology and Syntax, English Phonetics, French Phonetics, Eskimo Language and Culture and Introduction to Slavonic Linguistics. Additional information about the Summer School can be secured from Dr. E. Reinhold, Director, Summer School of Linguistics, University of Alberta, Edmonton, Alberta, Canada.

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Teachers College, Columbia University, under its ICA contract in Afghanistan, offers English Teaching positions that provide an unusual opportunity for experience and observation of many phases of cultures in contact.

Candidates should have a background of study in linguistics, experience in the teaching of a foreign language and a native command of English. Requests for application forms should be sent to Dr. David G. Scanlon, Teachers College, Columbia University, New York 27, New York. Positions will be filled as rapidly as possible.

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THE UNIVERSITY OF MICHIGAN ENGLISH LANGUAGE INSTI-
TUTE announces the expansion of its M.A. and research pro-
grams in the TEACHING OF ENGLISH AS A FOREIGN LAN-
GUAGE made possible by a grant from THE FORD FOUNDATION
for the support of (1) fellowships and scholarships to encourage
outstanding graduate students and teachers to prepare themselves
professionally in this field, (2) closed circuit television for the
observation and analysis of model classes, and (3) research on
language and the teaching and testing of English as a foreign
language.

The following fellowships and scholarships will be awarded
annually beginning the fall of 1959:

I. *One full fellowship and six tuition scholarships* for stu-
dents or teachers holding a Bachelor's degree and wishing to
work for the M.A. degree in Teaching English as a Foreign
Language. The M.A. program in Teaching English as a For-
eign Language includes courses and experience in the special
problems and methods of teaching English as a foreign language,
structural linguistics, English language structure and phonology,
American studies, language testing, and supervised practice
teaching. It requires two semesters and one summer of study.

II. *One short term fellowship and three tuition scholar-
ships* for teachers or students already holding a Master's degree
and wishing to devote the spring term to professional prepara-
tion in the teaching of English as a foreign language. The short
term program is a selected concentration of these subjects for
those already professionally qualified as teachers and holding a
Master's degree. The program is offered three times each
year. The awards are announced for the spring term only.

An increasing number of attractive positions in this field in
the United States and abroad are becoming available to trained
personnel. Applications and three letters of recommendation
from former teachers must be received by May 30, 1959.
Awards for this year will be announced by July 1. The Com-
mittee reserves the right to adjust the awards on the basis of
candidates available.

For applications, write to

> The Director
> English Language Institute
> University of Michigan
> Ann Arbor, Michigan

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# NOTES AND ANNOUNCEMENTS

The following communication entitled "A Note On The Use Of The Word 'Cognate'" and the subsequent reply have been received by the editors.

The last issue of this journal (Vol. VIII, Nos. 3 & 4) contains an article by Hei Sook Lee entitled 'English-Korean Cognates,' on the use of "cognates" in the teaching of English to Koreans. In the previous issue of LANGUAGE LEARNING (Vol. VIII, Nos. 1 & 2) we find 'A Study of English-Japanese Cognates' by Jiro Nagasawa, whose purpose is similar to Mrs. Lee's since he discusses briefly in concluding "the theory of selecting cognates to be used in materials for foreign language teaching." I do not intend here to consider the expressed purpose of these two articles. Rather I should like to consider, and to take exception to, the use of the word "cognate" as understood and applied therein.

In general linguistics the term "cognate" designates words or morphemes in two or more genetically related languages that have a common origin, which common origin we establish in accordance with certain accepted assumptions and canonical procedures of historical and comparative linguistics. By definition "cognate" denotes a unique specific linguistic relationship. We may also speak of cognate languages. Now both the articles in question are dealing, by explicit admission, with *loan words* from English into Korean and Japanese rather than with cognates in the sense just defined: '... many loan words from English were used by the educated people...' (Lee, p. 57); 'Most of the cognates, however, are loan words from English...' (Nagasawa, p. 53). To call loan words "cognates" is, I believe, misleading and unnecessary. It is, moreover, a disservice to general linguistics thus to extend and distort its terminology; such distortion can only lead to confusion and to the terminology's becoming ultimately vague and valueless in both general and applied linguistics. If our terminological tools are to retain any measure of force and intelligibility they should be employed with the utmost circumspection. I fail to understand fully, furthermore, why "loans" or "borrowings" are terms to be shunned for what are obviously and admittedly just that: loans or borrowings from English into Korean and Japanese.[1]

The authors are apparently dependent upon other sources for their terminological use in this area; both Mrs. Lee and Mr. Nagasawa quote from Fries[2] and Lado.[3] Fries (p. 50): 'It is at this stage that "cognates" *with careful handling* can be helpful."[4] Fries's use of quotation

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[1]I am aware of the terminlogical problem inherent in the situation, and I can only suggest that an entirely new term be coined to cover the phenomena discussed. This commends itself far more, I believe, than the extension, to the point of rendering it meaningless for both, of a long established term from a closely allied discipline.

[2]Charles C. Fries. *Teaching and Learning English as a Foreign Language.* Ann Arbor: University of Michigan Press. 1945.

[3]Robert Lado. *Linguistics Across Cultures.* Ann Arbor: University of Michigan Press. 1957.

[4]In quoting this passage, Mrs. Lee leaves out the crucial quotation marks enclosing "cognates."

marks suggests that he is aware of the fact that he is using the term in other than its normally accepted sense in linguistics. He is discussing Spanish words that 'come from the same source as English words,' most of the latter being words 'borrowed from Old French during the thirteenth and fourteenth centuries and others . . . directly from Latin.' While such words may be said to be cognates in a very literal sense of the term, i.e., having a common source, they are on an altogether different level from, say, "father" : (Sp.) *padre*, "foot" : (Sp.) *pie*, or (Fr.) *loi* : (Sp.) *ley* "law" and (Fr.) *mer* : (Sp.) *mar* "sea," and hundreds of similar *genuine* cognates that have in two (or more) languages *evolved naturally* from a common source, a condition I take to be implicit in the term "cognate" as normally understood in historical and comparative linguistics.

A further, and deliberate, extension of the term is attempted by Lado. In Ch. 4 'How to Compare Two Vocabulary Systems,' section 2.2.1[5] reads, in part: '*Cognates:* Words that are similar in form and meaning.' The word "cognates" is foonoted thus:

> '"Cognates" here are words that are similar in form and meaning regardless of origin. The usual meaning of the term is "related in origin." For us even if two words are not related in origin they will be called cognates if they are similar in form and meaning. Similarly, if two words have the same origin but are now so different that speakers of the two languages do not identify them as similar, they will not be considered cognates for our purposes.'

A further footnote (ftn. 19, p. 83) continues:

> '"Deceptive cognates" as used here refers only to similarity in form and difference in meaning; it does not refer to the origin of the words. In usual linguistic terminology deceptive cognates would refer to words in two languages that because of their form would seem to be related in origin but are not so related. For us such a case would be classed as a cognate provided the meanings were also similar.'

To this, I feel, strong objection must be taken as a dangerous and needless extension of established and accepted linguistic terminology. Such practices can only lead to misunderstanding and obscuring of genetic linguistic relationships and to a beclouding of the kind of relationship in which the interaction of unrelated languages leads to borrowing, whether mutual or unilateral, and to other phenomena invaluable to the study of linguistic and cultural history. English "mother," French *mère* are cognates; "hotel" and *hôtel* are not; English "hotel" is a loan word from French and to call it anything else, for whatever purpose, is misleading and inadmissible.

Mr. Nagasawa states that the number of English-Japanese "cognates" in Japanese (!!) 'is quite large when we consider the fact that English and Japanese belong to completely different language families.' Under such circumstances one pair of cognates would be surprising; 1500 (Mr. Nagasawa's figure) would be sufficient to establish English and Japanese

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[5]*Op. cit.*, p. 82.

as cognate languages provided, of course, that these were cognates in the normally accepted sense of the term and not, as Lee's, Nagasawa's and Lado's indeed are, pedagogical "cognates." In short, there is not a single instance of what can properly be called English-Korean or English-Japanese cognates unless we deny the evolutionary genetic relationship implicit in the term "cognate" which, I insist, should not be permitted.

Elsewhere in these pages I have made a plea for greater cross-pollenization between general and applied linguistics. [6] Here I would reiterate that plea, and ask further for mutual respect for the terminology and concepts as established and accepted by one or the other field. Applied linguistics, more specifically language teaching, is not yet so independent of general linguistics (its acknowledged parent) that it can remold the terminology of the latter to its own ends without risk of ensuing confusion.

The simple fact is, of course, that both Korean and Japanese contain hundreds of loans or borrowings from English, just as English itself contains hundreds of loans from scores of languages, related and unrelated. I strongly urge that these be so labeled and recognized and not falsely advertised as cognates.

<div style="text-align:right">

O. L. Chavarria-Aguilar
University of Michigan

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*To the Editor:*

I agree that the term "cognate" is not a particularly good one in bilingual descriptions for words that are similar in form and meaning in the native language of the student and the language he is learning.

I cannot agree with Chavarria-Aguilar's suggestion that we use the term loan words. In many cases the origin of the similarity is not known, or is not merely the result of borrowing from English to Japanese or vice versa but from say German to both English and Japanese or from Latin to Portuguese to Japanese and to Korean on one side and from Latin to Spanish on the other.

The history of the resemblance is of primary importance in philology, but it is not particularly relevant as a learning factor for students of a foreign language. Research on similarities that facilitate learning and differences that interfere with learning cannot wait until the origin of such similarities and differences has been fully established. Contrastive research to determine these learning difficulties is synchronic linguistics.

<div style="text-align:right">

Robert Lado

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The editors would like to add that should any resolutions to the above terminological problem be forthcoming we would be glad to hear of them.

## PUBLICATIONS RECEIVED

This list constitutes acknowledgement for all publications received by *Language Learning* and not previously acknowledged. As space permits, reviews will be printed of those publications which make special contributions to the application of the principles and results of scientific language study to the practical problems of teaching and learning languages.

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